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# DDG-37 CLASS SARP PLANNING DOCUMENT

February 1978

Prepared for PERA (CRUDES)  
under Contract N00140-76-D-0813

 **ARINC**  
RESEARCH CORPORATION

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 1809-01-2-1711	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) DDG-37 CLASS SARP PLANNING DOCUMENT.		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) AUTHORS NOT LISTED		6. PERFORMING ORG. REPORT NUMBER 1809-01-2-1711
9. PERFORMING ORGANIZATION NAME AND ADDRESS ARINC Research Corp. 2551 Riva Road Annapolis, Maryland 21401		8. CONTRACT OR GRANT NUMBER(s) N00140-76-D-0813
11. CONTROLLING OFFICE NAME AND ADDRESS Officer In Charge PERA (CRUDES) Philadelphia Navy Shipyard Philadelphia, Pa. 19113		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Officer In Charge PERA (CRUDES) Philadelphia Navy Shipyard Philadelphia, Pa. 19113		12. REPORT DATE Feb 1978
		13. NUMBER OF PAGES 362
		15. SECURITY CLASS. (of this report) Unclassified
16. DISTRIBUTION STATEMENT (of this Report) Unclassified/Unlimited		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) D D C RECEIVED MAR 6 1978 B		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) this Ship Alteration and Repair Package (SARP)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The purpose of the SARP Planning Document is to provide a detailed compilation of the overhaul work items derived from reference (a) including the planned R/M "D" SHIPALTS. These items will form the baseline of the total overhaul package. Further refinement and expansion based on the results of the Pre-Overhaul Test and Inspection (POT&I) conducted on each ship will formulate the proposed SARP. The SARP Planning Document will be used as an advanced planning document to assist in job order preparation, advanced material procurement, design work and early decision-making by those activities respon-		

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sible for supporting and conducting the overhaul prior to definition of the Authorized Ship Alteration and Repair Package (SARP) at the Work Definition Conference.

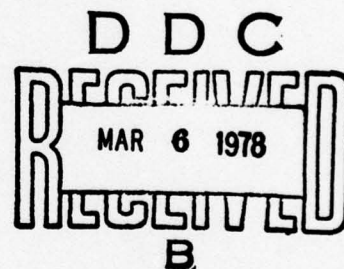
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ARINC Research Corporation  
*a Subsidiary of Aeronautical Radio, Inc.*  
2551 Riva Road  
Annapolis, Maryland 21401  
Publication 1809-01-2-1711

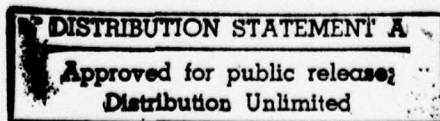


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DDG-37 CLASS SARP

PLANNING DOCUMENT

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PART 1

GENERAL INFORMATION

## PART 1

### GENERAL INFORMATION

REF: (a) Repair Profile for Baseline Overhaul of DDG-37 Class dated July 1977.

#### 1. General

a. The purpose of the SARP Planning Document is to provide a detailed compilation of the overhaul work items derived from reference (a) including the planned R/M "D" SHIPALTS. These items will form the baseline of the total overhaul package. Further refinement and expansion based on the results of the Pre-Overhaul Test and Inspection (POT&I) conducted on each ship will formulate the proposed SARP. The SARP Planning Document will be used as an advanced planning document to assist in job order preparation, advanced material procurement, design work and early decision-making by those activities responsible for supporting and conducting the overhaul prior to definition of the Authorized Ship Alteration and Repair Package (SARP) at the Work Definition Conference.

#### 2. POT&I (Pre-Overhaul Test & Inspection) Program

a. The Pre-Overhaul Test and Inspection Program is conducted for the purpose of accurately determining the need for, and extent of, refurbishment required during overhaul.

b. The Authorized Planning Agent and Ship's Force shall accomplish and evaluate the POT&I using test and inspection documentation provided separately. Actual operation of the ship's systems and equipment during the conduct of the POT&I is a Ship's Force function.

c. A summary of the evaluations and the work required as a result of the evaluations will be included in the proposed SARP.

#### 3. Assignment of Work

The assignment of work in this SARP Planning Document is divided between the Overhaul Activity (SY) and Forces Afloat (FA). Assignment to the Overhaul Activity is an authorization for the Overhaul Activity to institute accomplishment of the indicated action and the basis for starting advance planning and material ordering. Final assignments will be made at time of Work definition Conference (WDC).

#### 4. Advance Material List

The advance Material List is developed by the Overhaul Activity for all work items contained in the SARP Planning Document assigned a priority category of 1 or 2. The Overhaul Activity is authorized to procure this material when approved by the customer.



#### NOTE

Mandatory replacement parts are listed in Appendix A of the Technical Repair Standards (TRS). Contingency replacement parts are listed in Appendix B of the TRS and should be selectively procured based on previous overhaul experience with this item.

Work Priority Categories are defined as follows:

<u>Priority</u>	<u>Definition</u>
1.	Urgent repairs to correct conditions which prevent the ship from operating.
2.	Repairs required to correct deficiencies which seriously impair the effectiveness or reliability of the ship's operation, or which involve the health and safety of personnel.
3.	Repairs of a routine nature; routine tests and inspections.
4.	Convenience items.

#### 5. Assignment

Each line of a SWLIN has a designation in the ASSGMT column, i.e., SY, FA, DF, NA or other (specify). SY is an Overhaul Activity responsible work item and will have a manday estimate. FA is a Forces Afloat responsible work item and is not required to have a manday estimate. Forces Afloat work items scheduled for accomplishment prior to the ship's arrival at the Overhaul Activity will be designated by FA #. DF indicates a work item that has been deferred and NA indicates that the item has not been authorized at the Work Definition Conference. If an assignment other than SY, FA, DF or NA is designated, it will be specifically identified, i.e., NAVSECPHILADIV.

#### 6. Drydock Package

The SARP Planning Document contains standard work items that are usually associated with the drydocking package such as underwater body repairs, sea valves, propellers, etc. The decision to drydock the ship during this availability rests with the Type Commander.

#### 7. Proposed SARP Development

a. The SARP Planning Document is, in effect, a draft of the Proposed SARP and an estimate is required for each line item where the assignment is SY. Do not combine estimates.

b. Minor pen and ink changes to SARP Planning Document SWLIN pages are authorized on an individual ships "Proposed" SARP basis for the purposes of the Work Definition Conference, e.g., NA for SY assignment to clean and inspect CHT tanks, if ship has not had CHT installed.

c. In no case will work be added in with the established SARP Planning Document overhaul items.

d. Additional POT&I resultant work not within the SARP Planning Document boundaries will be reflected by adding item numbers and pages, as required, after the "NOTE" which will appear at the end of each SARP Planning Document SWLIN. An additional estimate is required for this work.

Example: If the last item of SARP Planning Document work on a SWLIN is 5., the additional work will be entered as follows:

5. \_\_\_\_\_

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

6.	Replace the following AUX Salt	<u>MD</u>	<u>COST</u>	<u>ASSIGMT</u>
	Water Valves.	15		SY

6.1 ASW 143, 135, 122, etc.

#### 8. Changes

Changes to the SARP Planning Document will be made by PERA (CRUDES) via message, letter or reissue of the SARP Planning Document.

PART 2

PREFACE



## PART 2

### PREFACE

1. Part 3 of the SARP Planning Document is a complete sequence listing of all the baseline repair work and serves as the primary document to establish the Overhaul Work Repair Package. Part 3 is indexed by Major Ship Systems (see paragraphs 3.0 through 3.9). Each Major Ship System is subdivided into Ship Systems. The Ship Systems are listed at the start of each subsection to Part 3.

Aforementioned work items are contained in the Ship System Work Descriptions (SSWDs) associated with each Ship System listed in the subsections of Part 3. Each SSWD is identified by the SWLIN designators. The designator identifies:

- a. The affected Ship System.
- b. The type of work (i.e., SHIPALT, ORDALT, maintenance, etc.)
- c. The Customer (i.e., NAVSEA, TYCOM, etc.)

The SWLIN classifications, Ship System boundaries, and cost estimating terms used in Part 3 are further defined in the Glossary (Part 6).

Whenever reference is made to a particular SWLIN, an asterisk (\*) is used in place of the revision letter, e.g., "... conducted under SWLIN 986L01\*".

2. Part 4 of the SARP Planning Document provides a listing of R/M "D" ALTS required to be accomplished during the baseline overhauls.

3. Part 5 of the SARP Planning Document contains a detailed record of all changes made to the SARP Planning Document when authorized.

4. Part 6 of the SARP Planning Document is a Glossary of terms unique to the SARP Planning Document.

## PART 2

## PREFACE (CONT)

SARP ISSUE

<u>SWLIN</u>	<u>PROPOSED</u>	<u>SWLIN</u>	<u>PROPOSED</u>
111A01	A	256A03	A
114A01	A	259A01	A
123A02	A	261A01	A
123A03	A	261A02	A
161A01	A	262A01	A
161A02	A	262A02	A
161A03	A	262A04	A
163A01	A		
165A01	A		
167A01	A		
167A02	A		
167A03	A		
		311A01	A
221A01	A	312A01	A
221A02	A	314A01	A
231A01	A	324A01	A
241A01	A	341A01	A
241A02	A	342A01	A
243A01	A		
243A02	A		
243A03	A	410A01	A
244A01	A	411A03	A
244A02	A	412A01	A
244A03	A	413A01	A
245A01	A	415A01	A
251A01	A	421A01	A
253A01	A	421A02	A
254A01	A	422A01	A
254A02	A	423A02	A
254A04	A	423A03	A
255A01	A	424A01	A
255A02	A	426A01	A
255A03	A	426A02	A
255A05	A	426A03	A
255A07	A	432A01	A
255A09	A	436A01	A
255A10	A	437A01	A
255A11	A	437A02	A
255A13	A	441A02	A
256A01	A	441A05	A
256A02	A	441A06	A

## PART 2

## PREFACE (CONT)

SARP ISSUE

<u>SWLIN</u>	<u>PROPOSED</u>	<u>SWLIN</u>	<u>PROPOSED</u>
441A07	A	534A03	A
445A01	A	534A04	A
446A01	A	534A05	A
450A01	A	534A07	A
450A02	A	534A08	A
451A01	A	536A01	A
452A01	A	536A02	A
453A01	A	536A06	A
455A01	A	541A01	A
461A01	A	541A03	A
463A01	A	541A04	A
471A01	A	551A01	A
472A01	A	551A02	A
475A01	A	551A03	A
481A01	A	551A04	A
481A03	A	555A01	A
482A01	A	561A01	A
482A02	A	562A01	A
483A01	A	571A02	A
491A01	A	581A01	A
		583A01	A
		583A02	A
		583A03	A
		583A04	A
		593A01	A
504A01	A		
508A01	A	602A01	A
513A01	A	611A01	A
514A01	A	631A01	A
514A02	A	633A01	A
516A01	A	633A02	A
520A01	A	634A01	A
521A03	A	638A01	A
523A01	A	655A01	A
524A02	A	665A01	A
526A01	A		
528A01	A	721A01	A
529A01	A	721A02	A
529A05	A	722A01	A
531A01	A	722A02	A
531A02	A	728A01	A
531A03	A	751A01	A
531A04	A		
531A05	A	813A01	A
533A04	A	830A01	A
533A07	A		
534A01	A		



PART 2

PREFACE (CONT)

SARP ISSUE

<u>SWLIN</u>	<u>PROPOSED</u>	<u>SWLIN</u>	<u>PROPOSED</u>
834A01	A		
840A01	A		
841A01	A		
851A01	A		
855A01	A		
856A01	A		
980A01	A		
982A01	A		
985A01	A		
986A01	A		
986A02	A		
986A03	A		
988A01	A		
990A01	A		
991A01	A		
992A01	A		
993A01	A		
997A01	A		

PART 3

SHIP SYSTEM WORK

PART 3.1

MAJOR SHIP SYSTEM 1



MAJOR SHIP SYSTEM 1 - HULL STRUCTURE

111	SHELL PLATING
114	SHELL APPENDAGES
123	TRUNKS AND ENCLOSURES
161	STRUCTURAL CASTINGS
163	SEA CHESTS
165	SONAR DOMES
167	HULL STRUCTURAL CLOSURES

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SHELL PLATING	JCN INDICATED BELOW	TITLE
SWLIN	111A01A	TOTAL SHIPYARD COST	EIC GROUP A101	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Shell Plating - Accomplish repair to shell plating in accordance with the report submitted under SWLIN 986A01\* (Item No. 2) and approved by TYCOM. (Reservation)

SY

(Includes supporting structures from flat keel to Main Deck, excluding all shell appendages.)

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	APPENDAGES, SHELL	JCN INDICATED BELOW	TITLE	JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN		TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR								
	114A01A		A101									

1. Shell Appendages - Accomplish repairs to shell appendages in accordance with the report submitted under SWLIN 986A01\* (Item No. 2) and approved by TYCOM. (Reservation)

(Includes skeg, bilge keels and shaft fairwaters.)

SY



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	TRUNKS AND ENCLOSURES		MAINTENANCE AND REPAIR
123A02A	TOTAL SHIPYARD COST	EIC GROUP	
		A904	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Fuel Oil and Ballast Tanks - Accomplish the following repairs:

(Includes the structural compartmentation of the tanks and the access manholes.)

- 1.1 Open and inspect fuel oil/ballast tanks. Provide copies of the inspection reports to the Type Commander and ship Commanding Officer.

SY      2

- 1.2 Accomplish structural repairs authorized as a result of inspection conducted in 1.1 above. (Reservation)

SY      2

NOTE: Preservation covered on SWLIN 631A01\*.

2. Pump down, open, clean and inspect L.O. tanks, submit report to Type Commander.

SY      2

- 2.1 Refill tanks to proper level with clean certified oil following any authorized repairs.

NOTE: Main reduction gear sumps covered in SWLIN 262A01\*

3. JP-5 Service and Drain Tanks - Accomplish the following repairs:

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	123A02*	TRUNKS AND ENCLOSURES						
	3.1		Open, clean and inspect JP-5 service and drain tanks. Provide copies of the inspection reports to the Type Commander and Ships Commanding Officer.				SY	2
	3.2		Accomplish structural repairs authorized as a result of inspection conducted in item 3.1 above. (Reservation)				SY	2

NOTE: Preservation covered in SWLIN 631A01\*.

NOTE: Additional repairs required to oil waste tanks as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TRUNKS AND ENCLOSURES	JCN INDICATED BELOW	TITLE
SWLIN	123A03A	TOTAL SHIPYARD COST	EIC GROUP A904	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Fresh and Feed Water Tanks - Accomplish the following repairs:

(Includes the structural compartmentation of the tanks and the access manholes.)

- 1.1 Open and inspect ten (10) fresh water and feedwater tanks. Identify necessary repairs and report to Type Commander.

SY 2

- 1.2 Accomplish structural repairs authorized as a result of inspection performed in 1.1 above.  
(Reservation)

SY 2

NOTE: Preservation covered on SWLIN 631A01\*.



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	STRUCTURAL CASTINGS	JCN INDICATED BELOW	TITLE
SWLIN	161A01A	TOTAL SHIPYARD COST	EIC GROUP AA01	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
-----	--------	-------------	-----	---------	---------	---------	-----

SY

2

1. Stern Tube - Accomplish repairs to stern tube in accordance with report submitted under SWLIN 986A01\* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes exterior structural weldments on skin of ship used to house main shafting from interior of ship to exterior, but does not include stern tube bearings or fairwaters.)

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN 161A02A	STRUCTURAL CASTINGS TOTAL SHIPYARD COST	EIC GROUP AA01	MAINTENANCE AND REPAIR

JCN                      ITEM #                      DESCRIPTION                      M/D                      MATL \$                      COST \$                      ASSIGMT                      PRI

1. Propeller Struts - Accomplish repairs to propeller/  
intermediate struts in accordance with report  
submitted under SWLIN 986A01\* (Item No. 2) and  
approved by Type Commander. (Reservation)

(Includes structural weldments from skin of ship  
used to house propeller shaft. Does not include  
strut bearing.)

SY

2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	STRUCTURAL CASTINGS	JCN INDICATED BELOW	TITLE
SWLIN	161A03A	TOTAL SHIPYARD COST	EIC GROUP AA01	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Rudder Bearing Trunk - Accomplish repairs to rudder bearing trunk in accordance with report submitted under SWLIN 986A01\* (Item No. 2) and approved by Type Commander. (Reservation)

SY      2

(Includes structural weldment from skin of ship used to house rudder post. Does not include rudder post bearings.)



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SEA CHESTS	EIC GROUP	MAINTENANCE AND REPAIR
163A01A	TOTAL SHIPYARD COST	AB00	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Sea Chests - Accomplish repairs to sea chests including removal, repair and reinstallation of splitter bars, strainers and waster sleeves authorized as a result of inspections conducted under SWLIN 986A01\* (Item No. 2). (Reservation)

(Includes structural recess from sea valve connection to hull; splitter bars, strainers, waster sleeves and injection scoops.)

NOTE: Painting covered on SWLIN 631A01\*.

SY      2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SONAR DOMES	JCN INDICATED BELOW	TITLE
SWLIN	165A01A	TOTAL SHIPYARD COST	EIC GROUP AF01	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Sonar Dome - Accomplish repairs to sonar dome in accordance with report submitted under SWLIN 986A01\* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes shell plating below dome connection to hull, framing, stiffeners, floors and bulkheads.)

NOTE: SHIPALT DDG-37-1037 or 1123 installs a second sonar dome.

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	HULL STRUCTURAL CLOSURES	JCN INDICATED BELOW	TITLE
SWLIN	167A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIRS
			ADO1	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

2

FA

1. Water-Tight Doors - Accomplish repairs to approximately forty-nine (49) water-tight doors to include but not limited to renewing gasket, cleaning and preserving gasket groove, cleaning knife edge and adjusting dogs in accordance with report submitted under SWLIN 986A01\* (Item No. 2) and approved by Type Commander. (Reservation)

(Includes door, operating mechanism, and frame.)

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	HULL STRUCTURAL CLOSURES	EIC GROUP	MAINTENANCE AND REPAIR
167A02A	TOTAL SHIPYARD COST	ADO5	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Hatches - Accomplish the following repairs in accordance with report submitted under SWLIN 986A01\* 'Item No. 2) and approved by the Type Commander. (Reservation):

1.1 Repair approximately twenty (20) hatches to include but not limited to renewing gasket, cleaning and preserving gasket groove, cleaning knife edge and adjusting dogs.

FA 2

(Includes hatch, operating mechanism and frame.)

1.2 Replace approximately two (2) water tight hatches.

SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	HULL STRUCTURAL CLOSURES	JCN INDICATED BELOW	TITLE
SWLIN	167A03A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Scuttles - Repair approximately six (6) scuttles in accordance with report submitted under SWLIN 986A01A (Item No. 2) and approved by the Type Commander to include but not limited to renewing gasket, cleaning and preserving gasket groove, cleaning knife edge and adjusting dogs.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

FA      2

PART 3.2

MAJOR SHIP SYSTEM 2



MAJOR SHIP SYSTEM 2 - PROPULSION PLANT

221	PROPULSION BOILERS
231	PROPULSION STEAM TURBINES
241	PROPULSION REDUCTION GEARS
243	PROPULSION SHAFTING
244	PROPULSION SHAFT BEARINGS
245	PROPULSORS
251	COMBUSTION AIR SYSTEM
253	MAIN STEAM PIPING SYSTEM
254	CONDENSERS AND AIR EJECTORS
255	FEED AND CONDENSATE SYSTEM
256	CIRCULATING AND COOLING SEA WATER SYSTEM
259	UPTAKES (INNER CASING)
261	FUEL SERVICE SYSTEM
262	MAIN PROPULSION LUBE OIL

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PROPULSION BOILERS	EIC GROUP	MAINTENANCE AND REPAIR
221A01A	TOTAL SHIPYARD COST	F101	

JCN ITEM # DESCRIPTION M/D MATL\$ COST \$ ASSIGMT PRI

1. Boiler No. 1A - Accomplish the following:

1.1 Start of overhaul inspection.

1.1.1 Prepare boiler for 125% hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Page 17.

SY 2

1.1.2 Conduct 125% hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Page 17.

SY 2

NOTE: NAVSEA Boiler Inspector will witness 125% hydrostatic test.

1.1.3 Prepare boiler for "Start of overhaul inspection" in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Pages 18 and 19.

FA 2

NOTE: NAVSEA Boiler Inspector will conduct the inspection.

NOTE: Drain and dry out boiler after hydrostatic test using dry method in accordance with NSTM Chapter 220 Paragraph 14.98.

1.1.4 Provide BTIU team and equipment to assist with inspection as directed by NAVSEA Boiler Inspector.

FA 2

1.1.5 Remove sample tubes as directed by NAVSEA Boiler Inspector. Analyze condition of removed tubes and submit report in accordance with NSTM Chapter 221.

SY 2

# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION	
SWLIN 221A01*	SYSTEM PROPULSION BOILERS
JCN	ITEM #
	DESCRIPTION
	M/D
	MATL \$
	COST \$
	ASSIGMT
	PRI

SY 2

- 1.1.6 Ultrasonically test following areas and provide report to Type Commander and PERA (CRUDES) Code 1850.3.
- 1.1.6.1 Sidewall and rearwall header blow nozzles.
- 1.1.6.2 Water and steam drum blow nozzles.
- 1.1.6.3 Superheater header drain and vent nozzles.
- 1.1.6.4 Economizer inlet and outlet header drain nozzles.

NOTE: Includes piping to first flange for all of above nozzles.

- i.1.6.5 Economizer header inlet and outlet nozzles.
- 1.1.6.6 Economizer header stubs from header to stub element butt weld.
- 1.1.6.7 At least 10 percent of economizer "U" bends.
- 1.1.6.8 Rearwall and sidewall tubes in areas normally embedded in refractory that, when exposed by refractory removal, shows apparent thinning.



# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

JCN		ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 221A01*			PROPULSION BOILERS					

NOTE: Readings should be taken at a minimum of four (4) points equidistant around the circumference of each selected tube.

1.2 Steam and water drum internals. SY 2

1.2.1 Remove steam and water drum internals.

1.2.2 Clean and visually inspect all internals.

1.2.3 Repair defective or cracked welds.

1.2.4 Replace all missing or damaged fasteners.

1.2.5 Reface four (4) desuperheater flanges, two (2) flanges on desuperheater inlet and outlet and the two (2) flanges on inlet and outlet nozzles in water drum.

1.2.6 Reinstall desuperheater and conduct hydrostatic test to 243 psi for DDG-37 thru 39 and 211 psi for DDG-40 thru 46.

1.2.7 Reinstall steam drum internals.

1.3 Boiler tube replacements.

SY 2

1.3.1 Replace tubes removed for samples. (Approximately 3 tubes)

1.3.2 Replace sidewall and rearwall tubes found defective as a result of "Start of overhaul inspection" (Reservation).

1.3.3 Replace superheater tubes found defective as a result of the "Start of overhaul inspection" (Reservation).

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 221A01*		SYSTEM	PROPULSION BOILERS					
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT PRI
1.4		Drums and Headers - Manhole/Handhole repairs.						SY 2
	1.4.1	Reface all sidewall, rearwall, superheater and economizer header handhole seats and plates.						
	1.4.2	Reface steam and water drum manhole seats and plates.						
	1.4.3	Radius sharp corners (1/8 in. min.) of drum and header bored openings.						
1.5		Refractory - Replace all refractory previously removed.						SY 2
	1.5.1	Replace existing refractory brick in accordance with SHIPALT DDG-37-1112D (shock hardened brickwork) if not previously accomplished.						
1.6		Air casing and panels.						SY 2
	1.6.1	Repair cracks in inner and outer casing plating and seams.						
	1.6.2	Replace defective or missing air casing panel studs, nuts and dogs. Replace all panel door gaskets.						
1.7		Soot blower and soot blower piping.						SY 2
	1.7.1	Overhaul rotary and stationary soot blowers in accordance with TRS 0221-086-						

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SYSTEM		M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	DESCRIPTION					
221A01*	PROPULSION BOILERS					
JCN	ITEM #					

1.7.2 Replace soot blower piping from all soot blower inlet flanges back to and including the root steam valve from the boiler. This is to include the root valve for each stationary soot blower.

NOTE: DDG-37 thru 39 (Foster Wheeler Boilers) have eleven (11) soot blowers - nine (9) rotary and two (2) stationary. DDG-40 thru 46 (Babcock and Wilcox Boilers) have eight (8) soot blowers - six (6) rotary and two (2) stationary.

2. Boiler No. 1B - Accomplish the following:

2.1 Start of overhaul inspection.

2.1.1 Prepare boiler for 125% hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Page 17.

SY 2

2.1.2 Conduct 125% hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Page 17.

SY 2

NOTE: NAVSEA Boiler Inspector will witness 125% hydrostatic test.

2.1.3 Prepare boiler for "Start of overhaul inspection" in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Pages 18 and 19.

FA 2

NOTE: NAVSEA Boiler Inspector will conduct the inspection.



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 221A01*		SYSTEM	PROPULSION BOILERS				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI

NOTE: Drain and dry out boiler after hydrostatic test using dry method in accordance with NSTM Chapter 220 Paragraph 14.98.

2.1.4 Provide BTIU team and equipment to assist with inspection as directed by NAVSEA Boiler Inspector. FA 2

2.1.5 Remove sample tubes as directed by NAVSEA Boiler Inspector. Analyze condition of removed tubes and submit report in accordance with NSTM Chapter 221. SY 2

2.1.6 Ultrasonically test following areas and provide report to Type Commander and PERA (CRUDES) Code 1850.3. SY 2

2.1.6.1 Sidewall and rearwall header blow nozzles.

2.1.6.2 Water and steam drum blow nozzles.

2.1.6.3 Superheater header drain and vent nozzles.

2.1.6.4 Economizer inlet and outlet header drain nozzles.

NOTE: Includes piping to first flange for all of above nozzles.

2.1.6.5 Economizer headers inlet and outlet nozzles.

# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION					
SWLIN	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$
221A01*	PROPULSION BOILERS				

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	2.1.6.6	Economizer header stubs from header to stub element on weld.					
	2.1.6.7	At least 10 percent of economizer "U" bends.					
	2.1.6.8	Rearwall and sidewall tubes in areas normally embedded in refractory that when exposed by refractory removal shows apparent thinning.					
	NOTE:	Readings should be taken at a minimum of four (4) points equidistant around the circumference of each selected tube.					
	2.2	Steam and Water drum internals.				SY	2
	2.2.1	Remove steam and water drum internals.					
	2.2.2	Clean and visually inspect all internals.					
	2.2.3	Repair defective or cracked welds.					
	2.2.4	Replace all missing or damaged fasteners.					
	2.2.5	Reface four (4) desuperheater flanges, two (2) flanges on desuperheater inlet and outlet and the two (2) flanges on inlet and outlet nozzles in water drum.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN		ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 221A01*		SYSTEM	PROPULSION BOILERS					
	2.2.6		Reinstall desuperheater and conduct hydrostatic test to 243 psi for DDG-37 thru 39 and 211 psi for DDG-40 thru 46.					
	2.2.7		Reinstall steam drum internals.					
	2.3		Boiler tube replacement.				SY	2
	2.3.1		Replace tubes removed for samples (Approximately 3 tubes).					
	2.3.2		Replace sidewall and rearwall tubes found defective as a result of "Start of overhaul inspection" (Reservation).					
	2.3.3		Replace superheater tubes found defective as a result of the "Start of overhaul inspection" (Reservation).				SY	2
	2.4		Drums and Headers - Manhole/Handhole repairs.					
	2.4.1		Reface all sidewall, rearwall, superheater and economizer header handhole seats and plates.					
	2.4.2		Reface steam and water drum manhole seats and plates.					
	2.4.3		Radius sharp corners (1/8 in. min.) of drum and header bored openings.					
	2.5		Refractory - Replace all refractory previously removed.				SY	2
	2.5.1		Replace existing refractory brick in accordance with SHIPALT DDG-37-1112D (shock hardened brickwork) if not previously accomplished.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	PROPULSION BOILERS				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	2.6	Air casing and panels.				SY	2
	2.6.1	Repair cracks in inner and outer casing plating and seams.					
	2.6.2	Replace defective or missing air casing panel studs, nuts and dogs. Replace all panel door gaskets.					
	2.7	Soot blower and soot blower piping.				SY	2
	2.7.1	Overhaul rotary and stationary soot blowers in accordance with TRS 0221-086-____.					
	2.7.2	Replace soot blower piping from all soot blower inlet flanges back to and including the root steam valve from the boiler. This is to include the root valve for each stationary soot blower.					

NOTE: DDG-37 thru 39 (Foster Wheeler Boilers) have eleven (11) soot blowers - Nine (9) rotary and two (2) stationary. DDG-40 thru 46 (Babcock and Wilcox Boilers) have eight (8) soot blowers - six (6) rotary and two (2) stationary.

3. Boiler No. 2A - Accomplish the following:

3.1 Start of overhaul inspection.

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 221A01*			PROPULSION BOILERS					
	3.1.1		Prepare boiler for 125% Hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Page 17.				SY	2
	3.1.2		Conduct 125% Hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Page 17.				SY	2
NOTE: NAVSEA Boiler Inspector will witness 125% hydrostatic test.								
	3.1.3		Prepare boiler for "Start of overhaul inspection" in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010130 Pages 18 and 19.				FA	2
NOTE: NAVSEA Boiler Inspector will conduct the inspection.								
NOTE: Drain and dry out boiler after hydrostatic test using dry method in accordance with NSTM Chapter 220 Paragraph 14.98.								
	3.1.4		Provide BTIU team and equipment to assist with inspection as directed by NAVSEA Boiler Inspector.				FA	2
	3.1.5		Remove sample tubes as directed by NAVSEA Boiler Inspector. Analyze condition of removed tubes and submit report in accordance with NSTM chapter 221.				SY	2
	3.1.6		Ultrasonically test following areas and provide report to Type Commander and PERA (CRUDES) Code 1850.3.				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	PROPULSION BOILERS			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI

3.1.6.1 Sidewall and rearwall header  
blow nozzles.

3.1.6.2 Water and steam drum blow  
nozzles.

3.1.6.3 Superheater header drain and  
vent nozzles.

3.1.6.4 Economizer inlet and outlet  
header drain nozzles.

NOTE: Includes piping to first flange for all of above nozzles.

3.1.6.5 Economizer headers inlet and  
outlet nozzles.

3.1.6.6 Economizer header stubs from  
header to stub element on weld.

3.1.6.7 At least 10 percent of econo-  
mizer "U" bends.

3.1.6.8 Rearwall and sidewall tubes in  
areas normally embedded in re-  
fractory that when exposed by  
refractory removal shows apparent  
thinning.

NOTE: Readings should be taken at a minimum of four (4) points  
equidistant around the circumference of each selected tube.



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		PROPULSION BOILERS		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 221A01*	3.2	Steam and water drum internals.					SY	2
		3.2.1	Remove steam and water drum internals.					
		3.2.2	Clean and visually inspect all internals.					
		3.2.3	Repair defective or cracked welds.					
		3.2.4	Replace all missing or damaged fasteners.					
		3.2.5	Reface four (4) desuperheater flanges, two (2) flanges on desuperheater inlet and outlet and the two (2) flanges on inlet and outlet nozzles in water drum.					
		3.2.6	Reinstall desuperheater and conduct hydrostatic test to 243 psi for DDG-37 thru 39 and 211 psi for DDG-40 thru 46.					
		3.2.7	Reinstall steam drum internals.					
	3.3	Boiler tube replacement.					SY	2
		3.3.1	Replace tubes removed for samples (Approximately 3 tubes).					
		3.3.2	Replace sidewall and rearwall tubes found defective as a result of "Start of overhaul inspection" (Reservation).					
		3.3.3	Replace superheater tubes found defective as a result of the "Start of overhaul inspection" (Reservation).					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 221A01*		SYSTEM	PROPULSION BOILERS					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	
	3.4	Drums and Headers - Manhole/Handhole repairs.				SY	2	
	3.4.1	Reface all sidewall, rearwall, super-heater and economizer header handhole seats and plates.						
	3.4.2	Reface steam and water drum manhole seats and plates.						
	3.4.3	Radius sharp corners (1/8 in. min.) of drum and header bored openings.						
	3.5	Refractory - Replace all refractory previously removed.				SY	2	
	3.5.1	Replace existing refractory brick in accordance with SHIPALT DDG-37-1112D (shock-hardened brickwork) if not previously accomplished.						
	3.6	Air casing and panels.				SY	2	
	3.6.1	Repair cracks in inner and outer casing plating and seams.						
	3.6.2	Replace defective or missing air casing panel studs, nuts and dogs. Replace all panel door gaskets.						
	3.7	Soot blower and soot blower piping.				SY	2	
	3.7.1	Overhaul rotary and stationary soot blowers in accordance with TRS 0221-086-						

## SHIP SYSTEM WORK DESCRIPTION

**ASSIGMT PRI**

NOTE: DDG-37 thru 39 (Foster Wheeler Boilers) have eleven (11) soot blowers - nine (9) rotary and two (2) stationary. DDG 40 thru 46 (Babcock and Wilcox Boilers) have six (6) rotary and two (2) stationary.

4. Boiler No. 2B - Accomplish the following:

#### 4.1 Start of overhaul inspection.

4.1.1.1 Prepare boiler for 125% hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221R1010130 page 17.

4.1.2 Conduct 125% hydrostatic test in accordance with 1200 psi Propulsion Plant Test Procedure No. 221Fl0130 Page 17.

**NOTE:** NAVSEA Boiler Inspector will witness 125% hydrostatic test.

4.1.3 Prepare boiler for "Start of overhaul inspection" in accordance with L200 psi Propulsion Plant Test Procedure No. 221F1010130 Pages 18 and 19.

**NOTE:** NAVSEA Boiler Inspector will conduct the inspection.



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 221A01*			PROPULSION BOILERS					
			NOTE: Drain and dry out boiler after hydrostatic test using dry method in accordance with NSTM Chapter 220 Paragraph 14.98.					
	4.1.4		Provide BTIU team and equipment to assist with inspection as directed by NAVSEA Boiler Inspector.				FA	2
	4.1.5		Remove sample tubes as directed by NAVSEA Boiler Inspector. Analyze condition of removed tubes and submit report in accordance with NSTM Chapter 221.				SY	2
	4.1.6		Ultrasonically test following areas and provide report to Type Commander and PERA (CRUDES) Code 1850.3.				SY	2
			4.1.6.1 Sidewall and rearwall header blow nozzles.					
			4.1.6.2 Water and steam drum blow nozzles.					
			4.1.6.3 Superheater header drain and vent nozzles.					
			4.1.6.4 Economizer inlet and outlet header drain nozzles.					

NOTE: Includes piping to first flange for all of above nozzles.

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 221A01*		SYSTEM	PROPULSION BOILERS					
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
			4.1.6.5 Economizer headers inlet and outlet nozzles.					
			4.1.6.6 Economizer header stubs from header to stub element on weld.					
			4.1.6.7 At least 10 percent of economizer "U" bends.					
			4.1.6.8 Rearwall and sidewall tubes in areas normally embedded in refractory that when exposed by refractory removal shows apparent thinning.					
			NOTE: Readings should be taken at a minimum of four (4) points equidistant around the circumference of each selected tube.					
		4.2	Steam and water drum internals.				SY	2
		4.2.1	Remove steam and water drum internals.					
		4.2.2	Clean and visually inspect all internals.					
		4.2.3	Repair defective or cracked welds.					
		4.2.4	Replace all missing or damaged fasteners.					
		4.2.5	Reface four (4) desuperheater flanges, two (2) flanges on desuperheater inlet and outlet and the two (2) flanges on inlet and outlet nozzles in water drum.					
		4.2.6	Reinstall desuperheater and conduct hydrostatic test to 243 psi for DDG-37 thru 39 and 221 psi for DDG-40 thru 46.					
		4.2.7	Reinstall steam drum internals.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 221A01*		SYSTEM	PROPULSION BOILERS					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	
	4.3	Boiler tube replacement				SY	2	
	4.3.1	Replace tubes removed for samples (Approximately 3 tubes).						
	4.3.2	Replace sidewall and rearwall tubes found defective as a result of "Start of overhaul inspection" (Reservation).						
	4.3.3	Replace superheater tubes found defective as a result of the "Start of overhaul inspection" (Reservation).						
	4.4	Drums and Headers - Manhole/Handhole repairs.				SY	2	
	4.4.1	Reface all sidewall, rearwall, superheater and economizer header handhole seats and plates.						
	4.4.2	Reface steam and water drum manhole seats and plates.						
	4.4.3	Radius sharp corners (1/8 in. min.) of drum and header bored openings.						
	4.5	Refractory - Replace all refractory previously removed.				SY	2	
	4.5.1	Replace existing refractory brick in accordance with SHIPALT DDG-37-1112D (shock-hardened brickwork) if not previously accomplished.						



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSIGMT	PRI
		SYSTEM	PROPULSION BOILERS					

4.6 Air casing and panels.

SY 2

4.6.1 Repair cracks in inner and outer casing plating and seams.

4.6.2 Replace defective or missing air casing panel studs, nuts and dogs. Replace all panel door gaskets.

4.7 Soot blower and soot blower piping.

SY 2

4.7.1 Overhaul rotary and stationary soot blowers in accordance with TRS 0221-086-\_\_\_\_\_.

4.7.2 Replace soot blower piping from all soot blower inlet flanges back to and including the root steam valve from the boiler. This is to include the root valve for each stationary soot blower.

NOTE: DDG-37 thru 39 (Foster Wheeler Boilers) have eleven (11) soot blowers - nine (9) rotary and two (2) stationary. DDG-40 thru 46 (Babcock and Wilcox Boilers) have eight (8) soot blowers - six (6) rotary and two (2) stationary.

5. Burner Assemblies, Boilers No. 1A, 1B, 2A and 2B.

SY 2

5.1 Overhaul sixteen (16) burner and register assemblies and thirty-two (32) burner barrels in accordance with TRS 0221-086-\_\_\_\_\_.

NOTE: Includes air registers, burner housings, automatic safety couplings, thirty-two (32) burner barrels and atomizer assemblies back to, but not including, oil and steam root valves.

5.2 Reinstall, connect and align burners.

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 221A01*			PROPULSION BOILERS					
	6.		Safety Valves, Boilers No. 1A, 1B, 2A and 2B.  6.1 Overhaul twelve (12) safety valves and four (4) pilot actuator valves in accordance with TRS 0221-086-___.				SY	2
	NOTE:		Includes safety valve body, bonnet assembly, valve internals, pilot actuator, valve harness and valve easing gear.  6.2 Reinstall and set safety valves.					
	7.		Accomplish additional repairs required as a result of previous boiler inspection discrepancies and recommendations.				SY	2
	8.		Post Repair Test, Boilers No. 1A, 1B, 2A and 2B - Upon completion of repairs, perform the following tests:  8.1 Hydrostatic tests.  8.1.1 Boilers - 221F1010032-I-Phase I - Pressure Test.  8.1.2 Soot Blowers - 221F1010032-IV-Phase I - Pressure Test.				SY	2
	NOTE:		Upon completion of hydrostatic tests, lay up boilers using wet method (hydrazine) or dry method in accordance with NSTM chapter 220.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

## PROPULSION BOILERS

8.2 Inspection and operational tests.

8.2.1 Boilers - 221F1010032-I (omit Phase I - Pressure Test).

8.2.2 Air Casings and Uptakes - 221F-1010032-II.

8.2.3 Burners - 221F1010032-III.

8.2.4 Soot Blowers - 221F1010032-IV (omit Phase I - Pressure Test).

NOTE: If mock LOE is conducted, Phase I - Inspection of 221F1010032-I through IV shall be omitted.

NOTE: 1200 psi Propulsion Plant Test Procedure No. 200 U5000022 (Readiness for Boiler Light-Off) is performed in SWLIN 986A02\*.

NOTE: Boiler isolation valve repairs are covered in the following SWLINS:

Main Steam - SWLIN 253A01\*

Main Feed - SWLIN 255A01\*

Auxiliary Steam - SWLIN 534A03\*

NOTE: Additional repairs required as a result of previous boiler inspection discrepancies and recommendations, and as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION BOILERS	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
221A02A			F101	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
1.		Automatic Combustion/Feedwater Control System, Boiler No. 1A, 1B, 2A, and 2B - Accomplish the following repairs:					
	1.1	Overhaul and shop calibrate in accordance with TRS 0221-086-___ the following:				SY	2
	1.1.1	Feed water control valves.					
	1.1.2	Fuel oil control valves.					
	1.1.3	Steam assist control valves.					
	1.1.4	Selector switches.					
	1.1.5	Regulators.					
	1.1.6	Transmitters.					
	1.1.7	Relays.					
	1.1.8	Controllers.					
	1.1.9	Transfer valves and needle valves.					
	1.1.10	Reducing valves.					
	1.2	Calibrate all gages and indicators.				SY	2
	1.3	Inspect all control tubing and fittings for damage, fouling, missing parts and proper connections.				SY	2
	1.4	Flush entire air system with Trisodiumphosphate.				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		PROPULSION BOILERS			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$
				ASSGMT	PRI

- 1.5 Perform post overhaul testing, adjusting and calibration of Automatic Combustion/Feedwater Control System in accordance with 1200 psi Propulsion Plant Test Procedure No. 221F1010042-I (ACC/FWC - General Regulator/Copes), 221F1010042-II (ACC/FWC - Bailey/Bailey), 221F1010042-III (ACC/FWC General Regulator/General Regulator) or 221F1010042-IV (Hagen/Hagen).

NOTE: Control air system, ACC/FWC and L.P. Air System cleaning and pressure test performed on SWLIN 551A02\*.

NOTE: Main Feed Pump Differential and Recirculating Control Systems repairs are covered on SWLIN 255A02\*.

NOTE: Additional repairs required to ACC/FWC sensing line connections and air supply valves immediately upstream of reduced air stations to the forced draft blower turbine steam valve operators, and up to and including the feedwater control, fuel oil and steam assist control valves, selector switches, regulators, transmitters, relays, controllers, and associated gages, indicators and instrumentation as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PROPULSION STEAM TURBINES		MAINTENANCE AND REPAIR
231A01A	TOTAL SHIPYARD COST	EIC GROUP F800	

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSGMT	PRI
1.	No. 1 and 2, H.P. Turbines - Accomplish the following repairs:						
	1.1	Replace H.P. Turbine rotor bearings. Take and record clearances.				SY	2
	1.2	Inspect and reseal ahead throttle valve.				SY	2
	1.3	Renew turbine shaft gland packing.				SY	2
2.	No. 1 and 2 L.P. Turbines - Accomplish the following repairs:						
	2.1	Replace L.P. Turbine rotor bearings. Take and record clearances.				SY	2
	2.2	Inspect and reseal astern throttle valve.				SY	2
	2.3	Renew turbine shaft gland packing.				SY	2
	2.4	Ahead/Astern Valve - Clean and inspect linkage.				SY	2
3.	Perform post overhaul testing of H.P. and L.P. turbines in accordance with 1200 psi Propulsion Plant Test Procedure No. 231F8000022 (Main Turbines and Reduction Gear). Omit turbine bearing clearance measurements.					SY	2

NOTE: Additional repairs required to H.P. turbine, L.P. turbine, bedplates and sub-bases, integral piping, operating gear and remote throttle controls as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION REDUCTION GEARS	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
241A01A			FC01	

JCN      ITEM #      DESCRIPTION      M/D      MATLS      COST \$      ASSIGNMT      PRI

1. Propulsion Reduction Gears No. 1 and 2 -  
Accomplish the following repairs:

- 1.1 Provide dehumidification for main reduction gears for duration of ROH.

- 1.1.1 Install desiccant or refrigerant type dehumidifier on reduction gearcase as soon as gear lube oil system is secured. Humid air inlet shall be attached at top of gearcase and dry air delivery at a gearcase low point where circulation shall not be impeded.

- 1.1.2 If silica gel containers are used, containers shall be inspected for oil contamination periodically and replaced as necessary.

- 1.1.3 In conjunction with ship's force inspect gearcase and rotating elements twice weekly for condition of oil film. Shipyard shall wet internal surfaces with oil spray as necessary and maintain a record of inspection for ultimate distribution to ship's force.

NOTE: Frequency of inspections may be changed as experience indicates.

- 1.1.4 Dehumidification shall be in effect at all times except when lube oil system/gear unit is in operation.

SY(P) NA(A) 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN		ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 241A01*				PROPULSION REDUCTION GEARS					
		2.		Main Thrust Bearing No. 1 and 2 - Accomplish the following repairs:				SY(P) FA(A)	2
		2.1		Set main thrust bearing clearances.					
		3.		Measure main thrust bearing clearance in accordance with 1200 psi Propulsion Plant Test Procedure No. 241FC010042 (Main Thrust and Line Shaft Bearing). Phase II.				SY(P) FA(A)	2

NOTE: Test to be performed in conjunction with test of Main Propulsion Turbines (SWLIN 231A01\*).

NOTE: Additional repairs required to operating gear and machinery guards, auxiliary integral components, gear case ventilation and vapor pipes, lifting gear and oil pans as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION REDUCTION GEARS	JCN INDICATED BELOW	TITLE
SWLIN	241A02A	TOTAL SHIPYARD COST	EIC GROUP FC01	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Main Shaft Turning Gear - Perform post overhaul testing of Main Shaft Turning Gear in accordance with 1200 psi Propulsion Plant Test Procedure No. 241FC010032. (Shaft Turning Gear).				SY	2

NOTE: Additional repairs required to turbine reduction gearing, coupling, motor and motor controller, engaging assembly and brake assembly as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFTING	JCN INDICATED BELOW	TITLE
SWLIN 243A01A	TOTAL SHIPYARD COST		EIC GROUP FE03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
	1.	Replace syntron seals and inflatable boot.				SY	2
	2.	Stern Tube Seal - Perform post overhaul testing of Stern Tube Syntron Seal in accordance with 1200 psi Propulsion Plant Test Procedure No. 243FE000022 (Stern Tube Syntron Seal).				SY	2

NOTE: Inspection Phase 1 of Test Procedure No. 243FE000022 not required if Item 1 is authorized.

NOTE: Additional repairs required to mechanical and inflatable seals, stuffing box and packing gland (does not include stern tube flushing water system covered in SWLIN 524A0 \*) as a result of the POT&I and dry-dock inspections are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFTING	JCN INDICATED BELOW	TITLE
SWLIN	243A02A	TOTAL SHIPYARD COST	EIC GROUP	FE03
				MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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## 1. Internal Shafting - Accomplish following repairs:

1.1	Visually inspect internal shafting for cracks and deterioration. Remove corrosion to determine the extent of pitting.	SY	2
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1.2	Accomplish repairs authorized as a result of inspection performed in 1.1 above in accordance with applicable portions of TRS 0243-086-602. (Reservation)	SY	2
-----	--	----	---

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01\*, 243A03\* and 244A01\*.

NOTE: Additional repairs required to propeller shafting from forward-most coupling to stern tube seal and bulkhead stuffing boxes (does not include line shaft bearing covered in SWLIN 244A01\*) as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFTING	JCN INDICATED BELOW	TITLE
SWLIN	243A03A	TOTAL SHIPYARD COST	EIC GROUP	FE03
				MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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## 1. External Shafting.

(Includes propeller shafting from stern tube seal to aftermost extent, Prairie System air piping and check valve, rotating fairwaters and rope guard. Does not include propeller, propeller nut, bearings and seals.)

1.1 Accomplish repairs to external shafting authorized as a result of inspection performed under SWLIN 986A01\* (Item No. 2) in accordance with applicable portions of TRS 0243-086-602. (Reservation)

SY 2

1.2 Repair shaft covering that is damaged, incomplete or lacks adherence. Spark test shaft covering. (Reservation)

SY 2

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01\*, 243A02\*, and 255A01\*.

NOTE: Full extent of repairs will be determined as a result of the drydock inspection.



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFT BEARINGS	JCN INDICATED BELOW	TITLE
SWLIN	244A01A	TOTAL SHIPYARD COST	EIC GROUP FE03	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATLS      COST \$      ASSIGMT      PRI

1.      Line Shaft Bearing - Inspect and check alignment of the line shaft bearing.

1.1      Take bearing reaction readings (water borne).

1.2      Calibrate bearing oil dipstick.

1.3      Replace and stake oil disc (oil ring) screw.

1.4      Check and align bearing oil seal.

1.5      Take and record post repair bearing clearance readings.

NOTE:      Repair to be accomplished concurrently with SWLINS 243A01\*, 243A02\*, and 243A03\*.

NOTE:      Perform post overhaul test of line shaft bearing in accordance with 1200 psi Propulsion Plant Test Procedure No. 241FC010042 Phase I.

NOTE:      Additional repairs required to line shaft bearing, pedestal, oil seals and access locking devices as a result of the POT&I are as follows:

SY      2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PROPULSION SHAFT BEARINGS	EIC GROUP	MAINTENANCE AND REPAIR
244A02A	TOTAL SHIPYARD COST	FE03	

JCN      ITEM #      DESCRIPTION      M/D      MATLS      COST \$      ASSIGMT      PRI

1. Stern Tube Bearing - Accomplish repairs to stern tube bearings authorized as a result of inspection conducted under SWLIN 986A01\* (Item No. 2). (Reservation)

(Includes stern tube bearings and bushings. Does not include stern tube and stern tube flushing system.)

2. Check bearing alignment and take post repair bearing reaction readings (water borne).

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01\*, 243A03\*, and 244A03\*.

SY 2

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSION SHAFT BEARINGS	JCN INDICATED BELOW	TITLE
SWLIN	244A03A	TOTAL SHIPYARD COST	EIC GROUP FE03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Propeller Strut Bearing - Accomplish repairs to strut bearings authorized as a result of inspection conducted under SWLIN 986A01\* (Item No. 2). (Reservation)

(Includes strut bearings and bushings. Does not include strut structure.)

2. Check bearing alignment and take post repair bearing reaction readings (water borne).

NOTE: Repairs to be accomplished concurrently with SWLINS 243A01\*, 243A03\*, and 244A03\*.

SY 2

SY 2



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PROPULSORS	JCN INDICATED BELOW	TITLE
SWLIN	245A01A	TOTAL SHIPYARD COST	EIC GROUP FE06	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Propeller - Accomplish repairs to propeller authorized as a result of inspection conducted under SWLIN 986A01\* (Item No. 2). (Reservation) Repairs to include but not be limited to:

(Includes the propeller, nut and cap, Prairie System emitter holes and passages.)

- 1.1 Accomplish in-place repair of minor cracks and holes.  
1.2 Tighten propeller nuts.  
1.3 Repack cap.

NOTE: Repairs to be accomplished in conjunction with SWLINS 243A03\* and 244A03\*.

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMBUSTION AIR	JCN INDICATED BELOW	TITLE
SWLIN	251A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			F401	

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSGMT	PRI
	1.	Forced Draft Blower No. 1A1 - Overhaul in accordance with TRS 0251-086-____.				SY	2

(Includes forced draft blower and turbine, air inlet flange, air discharge flange/base and mounting support, steam inlet and exhaust flange, steam inlet drain flange, turbine casing drain flange, valve body drain flange, gland exhaust flanges, oil drain and filler flanges, cooling water inlet and discharge flanges, lube oil cooler, four-way valve, lube oil filter, lubricating pump and governor drive, main (integral) lube oil pump, bearing oil relief valve, oil pump relief valve, lube oil pump (auxiliary), pressure switches (auxiliary lube oil pump), oil control block, nozzle control valve, PG governor, servo motor assembly, heat exchanger (governor), steam valve operator, steam inlet control valve, steam strainer, combined exhaust and relief valve, air lock-up valve, thermostatic temperature regulating valve, tachometers and control relay sender.)

	2.	Forced Draft Blower No. 1A2 - Overhaul in accordance with TRS 0251-086-____.				SY	2
	3.	Forced Draft Blower No. 1B1 - Overhaul in accordance with TRS 0251-086-____.				SY	2
	4.	Forced Draft Blower No. 1B2 - Overhaul in accordance with TRS 0251-086-____.				SY	2
	5.	Forced Draft Blower No. 2A1 - Overhaul in accordance with TRS 0251-086-____.				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		COMBUSTION AIR		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 251A01*	6.	Forced Draft Blower No. 2A2 - Overhaul in accordance with TRS 0251-086-_____.					SY	2
	7.	Forced Draft Blower No. 2B1 - Overhaul in accordance with TRS 0251-086-_____.					SY	2
	8.	Forced Draft Blower No. 2B2 - Overhaul in accordance with TRS 0251-086-_____.					SY	2
	9.	Perform post overhaul testing of No. 1A1, 1A2, 1B1, 1B2, 2A1, 2A2, 2B1, and 2B2 forced draft blowers in accordance with 1200 psi Propulsion Plant Test Procedure No. 251F4010022. (Forced Draft Blowers).					SY	2

NOTE: SHIPALT DDG-37-332K accomplishes major modifications to Hardie-Tynes Blowers.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	MAIN STEAM PIPING	JCN INDICATED BELOW	TITLE
SWLIN	253A01A	TOTAL SHIPYARD COST	EIC GROUP F700	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Main Steam Valves, 1200 psi - Accomplish a Class "B" overhaul to the valves listed in the following table. A Class "B" overhaul to the valves will include but not be limited to the valve disassembly and renewal of defective/worn seats, discs, stems, bonnets, and replacement of valve stem packing. Includes entire valve from in line piping joints to and including manual and remote operating gear; air motors for valves indicated, valve internals, and associated bypass valves where installed.

Valve Number	Valve Usage Description
MS-2	Stop Valve, 1A Boiler (including air motor)
MS-21	Stop Valve, 1B Boiler (including air motor)
MS-22	Stop Valve, 2A Boiler (including air motor)
MS-47	Stop Valve, 2B Boiler (including air motor)
MS-23	Guard Valve, 1A Boiler
MS-16	Guard Valve, 1B Boiler
7	Guard Valve, 2A Boiler
MS-44	Guard Valve, 2B Boiler
MS-7	Supply, 1A Boiler to Feed Pumps 1A, 1B, and 1C
MS-8	Supply, 1B Boiler to Feed Pumps 1A, 1B, and 1C.
MS-34	Supply, 2B Boiler to Feed Pumps 2A, 2B, and 2C.
MS-29	Guard, Main Engine Turbines No. 1 (including air motor)
MS-48	Guard, Main Engine Turbines No. 2 (including air motor)

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	SWLIN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	253A01*		MAIN STEAM PIPING						

Valve Number	Valve Usage Description
1	Guard, 1C Feed Pump
2	Guard, 2B Feed Pump
3	Guard, 1B Feed Pump
4	Guard, 2A Feed Pump
5	Guard, 1A Feed Pump
6	Guard, 2C Feed Pump
MS-18	Guard, 1A Turbogenerator
MS-20	Guard, 1B Turbogenerator
MS-51	Guard, 2A Turbogenerator
MS-53	Guard, 2B Turbogenerator
MS-11	Supply, 1C Feed Pump
MS-15	Supply, 1A Feed Pump
MS-13	Supply, 1B Feed Pump
MS-32	Supply, 2A Feed Pump
MS-36	Supply, 2C Feed Pump
MS-30	Supply, 2B Feed Pump
MS-25	Supply, 1A and 1B Turbogenerator
MS-46	Supply, 2A and 2B Turbogenerator

2. 1200 psi Steam Flanges - Repair leaking flanges as necessary.





# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONDENSERS AND AIR EJECTORS	JCN INDICATED BELOW	TITLE
SWLIN	254A01A	TOTAL SHIPYARD COST	EIC GROUP FA00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
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1. Main Condensing System No. 1 and 2 - Accomplish the following repairs:

1.1 Clean, inspect and conduct hydrostatic test of main condenser in accordance with NSTM Chapter 9460. Submit report of results to Type Commander.

1.2 Check and inspect butterfly valves.

2. Perform overhaul testing of Main Condenser and Air Ejectors in accordance with 1200 psi Propulsion Plant Test Procedure No. 254FA010022 (Main Condenser and Air Ejectors).

NOTE: Additional repairs required to main condenser, main air ejectors and air ejector condenser as a result of the POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONDENSERS AND AIR EJECTORS	JCN INDICATED BELOW	TITLE
SWLIN	254A02A	TOTAL SHIPYARD COST	EIC GROUP	310E

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Ships Service Turbogenerator Condensing System -  
Accomplish the following repairs:

- 1.1 Clean, inspect and conduct hydrostatic test of four (4) ships service turbogenerator condensers in accordance with NSTM Chapter 9460. Submit report of results to Type Commander.

2. Perform overhaul testing of No. 1A, 1B, 2A, and 2B Ships Service Turbogenerator Condensers and Air Ejectors in accordance with 1200 psi Propulsion Plant Test Procedure No. 254310E0022 (Auxiliary Condenser and Air Ejectors).

NOTE: Additional repairs required to ships service turbogenerator condensers, air ejectors and air ejector condensers as a result of the POT&I are as follows:

SY 2

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
254A04A	CONDENSERS AIR EJECTORS TOTAL SHIPYARD COST	EIC GROUP F808	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSGMT	PRI
1.		Auxiliary Gland Exhaust/Leak-Off Condenser No. 1 and 2 (includes main turbine) - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	1.1	Chemically clean sea water side.					
	1.2	Hydrostatically test sea water and steam sides.					
	1.3	Replace defective tubes, repair defective water boxes, shell and tube sheets.					
	1.4	Overhaul and set salt water relief valve.					
	1.5	Replace seals, gaskets and fasteners, and hydrostatically test condenser.					
	1.6	Gages and Thermometers - Repair and calibrate.					
2.		Gland Exhaust Fan Motors No. 1 and 2 - Accomplish a Class "B" overhaul.				SY	2
3.		Perform overhaul testing of the Auxiliary Gland Condenser, Auxiliary Gland Exhauster and SSTG Gland Exhauster in accordance with 1200 psi Propulsion Plant Test Procedure No. 254F8080022 (Gland Exhauster and Condensers). Omit post repair hydrostatic test of condenser (covered in Item 1.5).					
	3.1	Prerequisites and Inspection - Phase I				SY	2
	3.2	Prerequisites and Operation - Phase II				SY	2
	3.3	Prerequisites and Operation - Phase III				SY	2



# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN 254A04*		SYSTEM	CONDENSERS AIR EJECTORS						
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT	PRI

NOTE: Additional repairs required to auxiliary gland exhauster and SSTG gland exhauster condensers as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A01A	TOTAL SHIPYARD COST	EIC GROUP F30J	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Deaerating Feed Tank No. 1 and 2 - Accomplish a Class "B" overhaul of the following valves:

- 1.1 Auxiliary exhaust inlet check valve.
- 1.2 Spray nozzles (16) sixteen.
- 1.3 Pressure relief valve.
- 1.4 Vacuum breaker.

2. Perform overhaul testing of Deaerating Feed Tank in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30J0022 (Deaerating Feed Tank). Omit setting of pressure relief and vacuum breaker (covered in Item 1).

- 2.1 Prerequisites and Pressure Test - Phase I
- 2.2 Prerequisites and Inspection - Phase I
- 2.3 Prerequisites and Operation - Phase III

NOTE: Additional repairs required to deaerating feed tank, sight glass and sample cooler as a result of the POT&I are as follows:

SY	2
SY	2
SY	2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A02A	TOTAL SHIPYARD COST	EIC GROUP F303	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Main Feed Pump No. 1A - Accomplish the following repairs:

1.1 Turbine - Overhaul in accordance with TRS 0255-086-\_\_\_\_\_. (Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven, electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction).

SY 2

1.2 Pump - Overhaul in accordance with TRS 0255-086-\_\_\_\_\_. (Includes pump, thrust bearing and coupling).

SY 2

NOTE: Exclude shop testing of main feed pump where facilities are not available.

NOTE: MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01\*.

2. Main Feed Pump No. 1B - Accomplish the following repairs:

2.1 Turbine - Overhaul in accordance with TRS 0255-086-\_\_\_\_\_. (Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction).

SY 2



## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A02*	SYSTEM	FEED AND CONDENSATE	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN			2.2	Pump - Overhaul in accordance with TRS 0255-086-_____. (Includes pump, thrust bearing and coupling).				SY	2
			NOTE:	Exclude shop testing of main feed pump where facilities are not available.					
			NOTE:	MFP Turbine combined and relief valves covered in SWLIN 534A01*.					
			3.	Main Feed Pump No. 1C - Accomplish the following repairs.				SY	2
			3.1	Turbine - Overhaul in accordance with TRS 0255-086-_____. (Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction).					
			3.2	Pump - Overhaul in accordance with TRS 0255-086-_____. (Includes pump, thrust bearing and coupling).				SY	2
			NOTE:	Exclude shop testing of main feed pump where facilities are not available.					
			NOTE:	MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01*.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		FEED AND CONDENSATE		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 255A02*	4.	Main Feed Pump No. 2A - Accomplish the following repairs:						
	4.1	Turbine - Overhaul in accordance with TRS 0255-086-_____. (Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven, electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction).					SY	2
	4.2	Pump - Overhaul in accordance with TRS 0255-086-_____. (Includes pump, thrust bearing and coupling).					SY	2
	NOTE: Exclude shop testing of main feed pump where facilities are not available.							
	NOTE: MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01*.							
	5.	Main Feed Pump No. 2B - Accomplish the following repairs:						
	5.1	Turbine - Overhaul in accordance with TRS 0255-086-_____. (Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven, electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction).					SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A02*		SYSTEM	FEED AND CONDENSATE				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	5.2	Pump - Overhaul in accordance with TRS 0255-086-_____. (Includes pump, thrust bearing and coupling).				SY	2
NOTE: Exclude shop testing of main feed pump where facilities are not available.							
		NOTE: MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01*.					
	6.	Main Feed Pump No. 2C - Accomplish the following repairs:					
	6.1	Turbine - Overhaul in accordance with TRS 0255-086-_____. (Includes turbine, thrust and journal bearings, gears, governor, governor valve, trip valve, lube pumps, turbine driven electric and hand, L.O. cooler, duplex L.O. strainer, oil pressure switches, controls and trips, low oil pressure and pump suction).				SY	2
	6.2	Pump - Overhaul in accordance with TRS 0255-086-_____. (Includes pump, thrust bearing and coupling).				SY	2
NOTE: Exclude shop testing of main feed pump where facilities are not available.							
		NOTE: MFP Turbine combined exhaust and relief valves covered in SWLIN 534A01*.					
	7.	Main Feed Pump Differential Control Systems for Boilers No. 1A, 1B, 1C, 2A, 2B and 2C.					



# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN		SYSTEM		FEED AND CONDENSATE			
255A02*							
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

- |       |  |  |  |  |  |    |   |
|-------|--|--|--|--|--|----|---|
| 7.1   | Overhaul and calibrate the following in accordance with TRS 0255-086-_____.                                      |  |  |  |  | SY | 2 |
| 7.1.1 | Differential ratio transmitters. (2)   |  |  |  |  |    |   |
| 7.1.2 | Master sender with set point unit. (1)   |  |  |  |  |    |   |
| 7.1.3 | Variable ratio totalizers. (2)   |  |  |  |  |    |   |
| 7.1.4 | Transfer valve. (3)  |  |  |  |  |    |   |
| 7.1.5 | Relay sender. (3)  |  |  |  |  |    |   |
| 7.1.6 | Compensating relay. (3)  |  |  |  |  |    |   |
| 7.1.7 | Self cleaning strainer (1/4-2 inch). (13)  |  |  |  |  |    |   |
| 7.1.8 | Reducing valve (1/4 inch) with mounting bracket. (3)   |  |  |  |  |    |   |
| 7.2   | Calibrate all gages and indicators. (Not in TRS).  |  |  |  |  | SY | 2 |
| 7.3   | Inspect all control tubing and fittings for damage, fouling, missing parts and proper connections. (Not in TRS). |  |  |  |  | SY | 2 |
| 8.    | Main Feed Pump Recirculating Control Systems No. 1A, 1B, 1C, 2A, 2B and 2C.                                      |  |  |  |  | SY | 2 |
| 8.1   | Overhaul and calibrate the following in accordance with TRS 0255-086-_____.                                      |  |  |  |  |    |   |
| 8.1.1 | Flow transmitter. (3)  |  |  |  |  |    |   |
| 8.1.2 | Variable ratio totalizer. (3)  |  |  |  |  |    |   |

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A02*		SYSTEM	FEED AND CONDENSATE		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION							
	8.1.3	Three-way diaphragm operated pneumatic valve (3/8 inch). (3)							
	8.1.4	Reducing valve (1/4 inch) with mounting bracket. (3)							
	8.1.5	Self cleaning strainers (1/4-2 inch). (3)							
	8.1.6	Diaphragm control valve and actuator (1-1/4 inch). (3)							
	8.2	Calibrate all gages and indicators. (Not in TRS).							
	8.3	Inspect all control tubing and fittings for damage, fouling, missing parts and proper connections. (Not in TRS).							
9.		Perform post overhaul testing No. 1A, 1B, 1C, 2A, 2B, and 2C Main Feed Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F3030022 (Main Feed Pump). (Main Thrust and Line Shaft Bearing)						SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
255A03A			F30H	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Main Condensate Pump No. 1A - Accomplish the following repairs:

1.1 Pump - Overhaul in accordance with TRS 0255-086-\_\_\_\_. (Includes pump, coupling, and base ring.)

1.1.1 Replace four (4) resilient mounts (not in TRS).

1.1.2 Replace five (5) flexible connectors on suction, discharge and vent lines (not in TRS).

1.1.3 Suction and Discharge Gages - Repair and calibrate (not in TRS).

1.2 Turbine - Overhaul in accordance with TRS 0255-086-\_\_\_\_.

2. Main Condensate Pump No. 1B - Accomplish the following repairs:

2.1 Pump - Overhaul in accordance with TRS 0255-086-\_\_\_\_. (Includes pump, coupling, base ring, and motor support pedestal.)

2.1.1 Replace four (4) resilient mounts (not in TRS).

2.1.2 Replace five (5) flexible connectors on suction, discharge and vent lines (not in TRS).

SY 2

SY 2

SY 2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A03*		SYSTEM	FEED AND CONDENSATE						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		
	2.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).							
	2.2	Motor - Overhaul in accordance with TRS 0255-086-____ - Replace ground strap.				SY	2		
	2.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:							
	2.3.1	Clean and preserve controller enclosure.							
	2.3.2	Clean and tighten terminals and connectors. Align contactors.							
	2.3.3	Replace defective or deteriorated wiring and components within controller enclosure.							
	3.	Main Condensate Pump No. 2A - Accomplish the following repairs:							
	3.1	Pump - Overhaul in accordance with TRS 0255-086-____. (Includes pump, coupling, and base ring.)				SY	2		
	3.1.1	Replace four (4) resilient mounts (not in TRS).							
	3.1.2	Replace five (5) flexible connectors on suction, discharge and vent lines (not in TRS).							
	3.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).							
	3.2	Turbine - Overhaul in accordance with TRS 0255-086-____.				SY	2		

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		FEED AND CONDENSATE		M/D	MATL \$	COST \$	ASSGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 255A03*	4.	Main Condensate Pump No. 2B - Accomplish the following repairs:						
	4.1	Pump - Overhaul in accordance with TRS 0255-086-_____. (Includes pump, coupling and motor support pedestal).					SY	2
	4.1.1	Replace four (4) resilient mounts (not in TRS).						
	4.1.2	Replace five (5) flexible connectors on suction, discharge, and vent lines (not in TRS).						
	4.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).						
	4.2	Motor - Overhaul in accordance with TRS 0255-086-____ - Replace ground strap.					SY	2
	4.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						
	4.3.1	Clean and preserve controller enclosure.						
	4.3.2	Clean and tighten terminals and connectors. Align contactors.						
	4.3.3	Replace defective or deteriorated wiring and components within controller enclosure.					SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	FEED AND CONDENSATE	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	SY	PRI
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5. Perform post overhaul testing of No. 1A, 1B, 2A and 2B Main Condensate Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30G0022 (Main Condensate Pump).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A05A	TOTAL SHIPYARD COST	EIC GROUP F309	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Main Feed Booster Pump No. 1A - Accomplish the following repairs:

1.1 Pump - Overhaul in accordance with TRS 0255-086-\_\_\_\_\_. (Includes pump, coupling and motor support pedestal).

1.1.1 Replace four (4) resilient mounts (not in TRS).

1.1.2 Replace flexible inserts in 90 degree flexible connectors (Ball/EB) on suction and discharge lines (not in TRS).

1.1.3 Replace one (1) flexible hose on vent line (not in TRS).

1.1.4 Suction and Discharge Gages - Repair and calibrate (not in TRS).

1.2 Motor - Overhaul in accordance with TRS 0255-086-\_\_\_\_ - Replace ground strap.

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors.

1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

SY 2

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 255A05*			FEED AND CONDENSATE					
	2.		Main Feed Booster Pump No. 1B - Accomplish the following repairs:					
	2.1		Pump - Overhaul in accordance with TRS 0255-086-____. (Includes pump, coupling and motor support pedestal).				SY	2
	2.1.1		Replace four (4) resilient mounts (not in TRS).					
	2.1.2		Replace flexible inserts in 90 degree flexible connectors (Ball/EB) on suction and discharge lines (not in TRS).					
	2.1.3		Replace one (1) flexible house on vent line (not in TRS).					
	2.1.4		Suction and Discharge Gages - Repair and calibrate (not in TRS).					
	2.2		Motor - Overhaul in accordance with TRS 0255-086-____ - Replace ground strap.				SY	2
	2.3		Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.3.1		Clean and preserve controller enclosure.					
	2.3.2		Clean and tighten terminals and connectors. Align contactors.					
	2.3.3		Replace defective or deteriorated wiring and components within controller enclosure.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A05*		SYSTEM	FEED AND CONDENSATE			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI
	3.	Main Feed Booster Pump No. 1C - Accomplish the following repairs:				
	3.1	Pump - Overhaul in accordance with TRS 0255-086-____. (Includes pump and coupling).				SY 2
	3.1.1	Replace four (4) resilient mounts (not in TRS).				
	3.1.2	Replace flexible inserts in 90 degree flexible connectors (Ball/EB) on suction and discharge lines (not in TRS).				
	3.1.3	Replace one (1) flexible hose on vent line (not in TRS).				
	3.1.4	Suction and Discharge Gages - Repair and calibrate (not in TRS).				
	3.2	Turbine - Overhaul in accordance with TRS 0255-086-____.				SY 2
	4.	Main Feed Booster Pump No. 2A - Accomplish the following repairs:				
	4.1	Pump - Overhaul in accordance with TRS 0255-086-____. (Includes pump, coupling and motor support pedestal).				SY 2
	4.1.1	Replace four (4) resilient mounts (not in TRS).				
	4.1.2	Replace flexible inserts in 90 degree flexible connectors (Ball/EB) on suction and discharge lines (not in TRS).				



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A05*		SYSTEM	FEED AND CONDENSATE				
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSIGMT PRI
	4.1.3	Replace one (1) flexible hose on vent line (not in TRS).					
	4.1.4	Suction and Discharge Gages - Repair and calibrate (not in TRS).					
	4.2	Motor - Overhaul in accordance with TRS 0255-086-___ - Replace ground strap.					SY 2
	4.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:					SY 2
	4.3.1	Clean and preserve controller enclosure.					
	4.3.2	Clean and tighten terminals and connectors. Align contactors.					
	4.3.3	Replace defective or deteriorated wiring and components within controller enclosure.					
	5.	Main Feed Booster Pump No. 2B - Accomplish the following repairs:					
	5.1	Pump - Overhaul in accordance with TRS 0255-086-___ (Includes pump, coupling and motor support pedestal).					SY 2
	5.1.1	Replace four (4) resilient mounts (not in TRS).					
	5.1.2	Replace flexible inserts in 90 degree flexible connectors (Ball/EB) on suction and discharge lines (not in TRS).					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A05*		SYSTEM	FEED AND CONDENSATE		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION							
	5.1.3	Replace one (1) flexible hose on vent line (not in TRS).							
	5.1.4	Suction and Discharge Gages - Repair and calibrate (not in TRS).							
	5.2	Motor - Overhaul in accordance with TRS 0255-086-____ - Replace ground strap.						SY	2
	5.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						SY	2
	5.3.1	Clean and preserve controller enclosure.							
	5.3.2	Clean and tighten terminals and connectors. Align contactors.							
	5.3.3	Replace defective or deteriorated wiring and components within controller enclosure.							
	6.	Main Feed Booster Pump No. 2C - Accomplish the following repairs:							
	6.1	Pump - Overhaul in accordance with TRS 0255-086-____. (Includes pump and coupling).						SY	2
	6.1.1	Replace four (4) resilient mounts (not in TRS).							
	6.1.2	Replace flexible inserts in 90 degree flexible connectors (Ball/EB) on suction and discharge lines (not in TRS).							

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A05*		SYSTEM	FEED AND CONDENSATE				
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	PRI
	6.1.3	Replace one (1) flexible hose on vent line (not in TRS).					
	6.1.4	Suction and Discharge Gages - Repair and calibrate (not in TRS).					
	6.2	Turbine - Overhaul in accordance with TRS 0255-086-_____.					
	7.	Perform post overhaul testing of No. 1A, 1B, 1C, 2A, 2B, and 2C Main Feed Booster Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F3080022 (Main Feed Booster Pump).					

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
255A07A			F30E	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Reserve Feed Transfer Pump No. 1 and 2 - Perform post overhaul testing of pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30E0022 (Reserve Feed Transfer Pump).

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A09A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			310E	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

1. Ships Service Turbogenerator Condensate Pump No. 1A - Accomplish the following repairs:

- 1.1 Pump - Overhaul in accordance with TRS 0255-086-608 (DDG-37, 38, 40, 45, 46), TRS 0255-086-657 (DDG-41, 42, 43, 44) or Class "B" overhaul (DDG-39). (Includes pump, coupling, and motor adapter.)

- 1.1.1 Replace four (4) resilient mounts (not in TRS).

- 1.1.2 Replace five (5) flexible connectors on suction, discharge, vent and recirculating lines (not in TRS).

- 1.1.3 Suction and Discharge Gages - Repair and calibrate (not in TRS).

- 1.2 Motor - Overhaul in accordance with TRS 0255-086-633 (DDG-37, 38, 40, 45, 46) or Class "B" overhaul (DDG-39, 41, 42, 43, 44) - Replace ground strap.

- 1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.3.1 Clean and preserve controller enclosure.

- 1.3.2 Clean and tighten terminals and connectors. Align contactors.

- 1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

SY 2

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	FEED AND CONDENSATE	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 255A09*									
	2.			Ships Service Turbogenerator Condensate Pump No. 1B - Accomplish the following repairs:					
	2.1			Pump - Overhaul in accordance with TRS 0255-086-608 (DDG-37, 38, 40, 45, 46), TRS 0255-086-657 (DDG-41, 42, 43, 44) or Class "B" overhaul (DDG-39). (Includes pump, coupling, and motor adapter.)				SY	2
	2.1.1			Replace four (4) resilient mounts (not in TRS).					
	2.1.2			Replace five (5) flexible connectors on suction, discharge, vent and recirculating lines (not in TRS).					
	2.1.3			Suction and Discharge Gages - Repair and calibrate (not in TRS).					
	2.2			Motor - Overhaul in accordance with TRS 0255-086-633 (DDG-37, 38, 40, 45, 46) or Class "B" overhaul (DDG-39, 41, 42, 43, 44) - Replace ground strap.				SY	2
	2.3			Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:					
	2.3.1			Clean and preserve controller enclosure.				SY	2
	2.3.2			Clean and tighten terminals and connectors. Align contactors.					
	2.3.3			Replace defective or deteriorated wiring and components within controller enclosure.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		FEED AND CONDENSATE		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 255A09*	3.	Ships Service Turbogenerator Condensate Pump No. 2A - Accomplish the following repairs:						
	3.1	Pump - Overhaul in accordance with TRS 0255-086-608 (DDG-37, 38, 40, 45, 46), TRS 0255-086-657 (DDG-41, 42, 43, 44) or Class "B" overhaul (DDG-39). (Includes pump, coupling, and motor adapter.)					SY	2
	3.1.1	Replace four (4) resilient mounts (not in TRS).						
	3.1.2	Replace five (5) flexible connectors on suction, discharge, vent and recirculating lines (not in TRS).						
	3.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).						
	3.2	Motor - Overhaul in accordance with TRS 0255-086-633 (DDG-37, 38, 40, 45, 46) or Class "B" overhaul (DDG-39, 41, 42, 43, 44). - Replace ground strap.					SY	2
	3.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						
	3.3.1	Clean and preserve controller enclosure.						
	3.3.2	Clean and tighten terminals and connectors. Align contactors.						
	3.3.3	Replace defective or deteriorated wiring and components within controller enclosure.					SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		FEED AND CONDENSATE		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 255A09*								
4.		Ships Service Turbogenerator Condensate Pump No. 2B - Accomplish the following repairs:						
	4.1	Pump - Overhaul in accordance with TRS 0255-086-608 (DDG-37, 38, 40, 45, 46), TRS 0255-086-657 (DDG-41, 42, 43, 44) or Class "B" overhaul (DDG-39). (Includes pump, coupling, and motor adapter.)					SY	2
	4.1.1	Replace four (4) resilient mounts (not in TRS).						
	4.1.2	Replace five (5) flexible connectors on suction, discharge, vent and recirculating lines (not in TRS).						
	4.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).						
	4.2	Motor - Overhaul in accordance with TRS 0255-086-633 (DDG-37, 38, 40, 45, 46) or Class "B" overhaul (DDG-39, 41, 42, 43, 44). - Replace ground strap.					SY	2
	4.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						
	4.3.1	Clean and preserve controller enclosure.						
	4.3.2	Clean and tighten terminals and connectors. Align contactors.						
	4.3.3	Replace defective or deteriorated wiring and components within controller enclosure.					SY	2

# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION	
SWLIN 255A09*	SYSTEM FEED AND CONDENSATE

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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- |  |    |  |  |  |  |    |   |
|--|----|--|--|--|--|----|---|
|  | 5. | Perform post overhaul testing of No. 1A, 1B, 2A and 2B<br>SSTG Condensate Pumps in accordance with 1200 psi<br>Propulsion Plant Test Procedure No. 255310C0022<br>(Auxiliary Condensate Pump). |  |  |  | SY | 2 |
|--|----|--|--|--|--|----|---|

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
255A10A			F30K	

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
	1.	Main Condensate Piping - Accomplish the following:					
	1.1	Perform overhaul testing of Main Condensate System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0032-I (Condensate System).					
	1.1.1	Prerequisites and Flush - Phase I				SY	2
	1.1.2	Prerequisites and Pressure Test - Phase I				SY	2
	1.1.3	Prerequisites and Inspection - Phase I				SY	2
	1.1.4	Prerequisites and Operation - Phase III (Turbogenerator)				SY	2
	1.1.5	Prerequisites and Operation - Phase IV (Main Turbine)				SY	2
	1.2	Perform post overhaul testing of Demineralizer (Ion Exchange) System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0032-II (Demineralizer).				SY	2

NOTE: Item 1.2 applicable if SHIPALT DDG-37-1207 has been previously completed. If SHIPALT is accomplished this ROH, the testing is covered in SWLIN 255D \*.

1.3 Perform post overhaul testing of Morpholine Injection System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0032-III (Morpholine Injection System).

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		FEED AND CONDENSATE	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #							

SWLIN  
255A10\*

NOTE: Item 1.3 applicable if SHIPALT DDG-37-1056 has been previously completed. If SHIPALT is accomplished this ROH, the testing is covered in SWLIN 255D \*.

NOTE: Additional repairs required to piping and valves from main and SSTG condensers, through main and auxiliary air ejector condensers, to the deaerating feed tank and from the freshwater drain collecting tank to the deaerating feed tank as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	255A11A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			F30K	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Perform overhaul testing of Feedwater Piping System in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30K0042 (Feed System).					
	1.1	Prerequisites and Flush - Phase I				SY	2
	1.2	Prerequisites and Pressure Test - Phase I				SY	2
	1.3	Prerequisites and Inspection - Phase I				SY	2
	1.4	Prerequisites and Operation - Phase III				SY	2

NOTE: Additional repairs required to piping and valves from outlet side of deaerating feed tank to boiler feed stop valves as a result of the POT&I are as follows:

100



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FEED AND CONDENSATE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
255A13A			TH04	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		Fresh Water Drain Tank Pump No. 1 - Accomplish the following repairs:					
	1.1	Pump - Overhaul in accordance with TRS 0255-086- (includes pump, coupling and motor support bracket).				SY	2
	1.1.1	Replace four (4) resilient mounts (not in TRS).					
	1.1.2	Replace one (1) each 90 degree suction and discharge flexible connections and one (1) flexible connection on recirculating line (not in TRS).					
	1.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).					
	1.2	Motor - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	1.2.1	Clean and inspect components.					
	1.2.2	Reinsulate coils, windings and leads.					
	1.2.3	Install new bearings, renew fasteners.					
	1.2.4	Shop test.					
	1.3	Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A13*		SYSTEM	FEED AND CONDENSATE						
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI	
			1.3.1		Clean and preserve controller enclosure.				
			1.3.2		Clean and tighten terminals and connectors. Align contactors.				
			1.3.3		Replace defective or deteriorated wiring and components within the controller enclosure.				
2.			Fresh Water Drain Tank Pump No. 2 - Accomplish the following repairs:						
	2.1		Pump - Overhaul in accordance with TRS 0255-086- (includes pump, coupling, and motor support bracket).						
		2.1.1	Replace four (4) resilient mounts (not in TRS).						
		2.1.2	Replace one (1) each 90 degree suction and discharge flexible connections and one (1) flexible connection on recirculating line (not in TRS).						
		2.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).						
	2.2		Motor - Accomplish a Class "B" overhaul to include but not limited to the following:						
		2.2.1	Clean and inspect components.						
		2.2.2	Reinsulate coils, windings and leads.						
		2.2.3	Install new bearings, renew fasteners.						
		2.2.4	Shop test.						

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 255A13*		SYSTEM	FEED AND CONDENSATE			
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$
	2.3	Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				
	2.3.1	Clean and preserve controller enclosure.				
	2.3.2	Clean and tighten terminals and connectors. Align contactors.				
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.				
	3.	Perform post overhaul testing of No. 1 and 2 Fresh Water Drain Tank Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 255F30L0022 (Fresh Water Drain Tank Pump).				

SY 2

SY 2

NOTE: SHIPALT DDG-37-354K replaces fresh water drain tank pumps.

NOTE: Additional repairs required in this SWLIN as a result of the POT&amp;I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CIRCULATING & COOLING SEA WATER	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
256A01A			FB00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Sea Water Circulating System - Accomplish the following repairs:					
	1.1	Replace three (3) expansion joints in the main circulating system in accordance with NAVSEA Hyattsville Msg. 182149Z AUG 75. Establish reference marks in accordance with NSTM Chapter 9480 and Figure 9480.1A.				SY	2
	1.1.1	Scoop injection inlet line.					
	1.1.2	Main circulating pump discharge line.					
	1.1.3	Main circulating water overboard discharge line.					
	1.2	Calibrate or replace all Sea Water Circulating System gages.				FA	2
	2.	Perform overhaul testing of Sea Water Circulating System in accordance with 1200 psi Propulsion Plant Test Procedure No. 256FB090022 (Salt Water Circulating Systems).					
	2.1	Prerequisites and Pressure Test - Phase I				SY	2
	2.2	Prerequisites and Inspection - Phase I				SY	2
	2.3	Prerequisites and Operation - Phase II				SY	2

NOTE: Sea water inlet, suction and overboard discharge valves repaired under SWLIN 520A01\*.

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	JCN						
256A01*		CIRCULATING & COOLING SEA WATER					

NOTE: Additional repairs to Main Condenser Circulating Water piping and valves (except injection scoop, overboard discharge sea chest, suction, inlet and discharge valves), SSTG Condenser Circulating Water System piping, valves (except sea suction and overboard discharge valves), expansion joints and branch piping to main lube oil cooler as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CIRCULATING & COOLING SEA WATER	JCN INDICATED BELOW	TITLE
SWLIN	256A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			310E	

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ - ASSIGMT PRI

- Ships Service Turbogenerator Circulating Pump No. 1A - Accomplish the following repairs:

1.1 Pump - Overhaul in accordance with TRS 0256-086- (includes pump assembly and motor adapter).

SY 2

1.1.1 Replace five (5) resilient mounts (not in TRS).

1.1.2 Replace suction and discharge flexible hoses (not in TRS).

1.1.3 Suction and Discharge Gages - Repair and calibrate (not in TRS).

1.2 Motor - Overhaul in accordance with TRS 0256-086-.

SY 2

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within controller enclosure.

- Ships Service Turbogenerator Circulating Pump No. 1B - Accomplish the following repairs:



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 256A02*		SYSTEM	CIRCULATING AND COOLING SEA WATER						
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSGMT	PRI
	2.1	Pump - Overhaul in accordance with TRS 0256-086-____ (includes pump assembly and motor adapter).						SY	2
	2.1.1	Replace five (5) resilient mounts (not in TRS).							
	2.1.2	Replace suction and discharge flexible hoses (not in TRS).							
	2.1.3	Suction and Discharge Gages - Repair and calibrate (not in TRS).							
	2.2	Motor - Overhaul in accordance with TRS 0256-086-____.						SY	2
	2.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						SY	2
	2.3.1	Clean and preserve controller enclosure.							
	2.3.2	Clean and tighten terminals and connectors. Align contactors.							
	2.3.3	Replace defective or deteriorated wiring and components within controller enclosure.							
	3.	Ships Service Turbogenerator Circulating Pump No. 2A - Accomplish the following repairs:							
	3.1	Pump - Overhaul in accordance with TRS 0256-086-____ (includes pump assembly and motor adapter).						SY	2
	3.1.1	Replace five (5) resilient mounts (not in TRS).							

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 256A02*	SYSTEM	CIRCULATING AND COOLING SEA WATER	DESCRIPTION	ITEM #	JCN	M/D	MATL \$	COST \$	ASSGMT	PRI
			3.1.2 Replace suction and discharge flexible hoses (not in TRS).							
			3.1.3 Suction and Discharge Gages - Repair and calibrate (not in TRS).							
			3.2 Motor - Overhaul in accordance with TRS 0256-086-____.						SY	2
			3.3 Controller - Accomplish a Class "B" overhaul to include but not limited to the following:							
			3.3.1 Clean and preserve controller enclosure.						SY	2
			3.3.2 Clean and tighten terminals and connectors. Align contactors.							
			3.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.							
			4. Ships Service Turbogenerator Circulating Pump No. 2B - Accomplish the following repairs:							
			4.1 Pump - Overhaul in accordance with TRS 0256-086-____ (includes pump assembly and motor adapter).						SY	2
			4.1.1 Replace five (5) resilient mounts (not in TRS).							
			4.1.2 Replace suction and discharge flexible hoses (not in TRS).							
			4.1.3 Suction and Discharge Gages - Repair and calibrate (not in TRS).							

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM		CIRCULATING AND COOLING SEA WATER			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	256A02*						
	4.2	Motor - Overhaul in accordance with TRS 0256-086-__.				SY	2
	4.3	Controller - Accomplish a Class "B" overhaul to include but not limited to the following:					
	4.3.1	Clean and preserve controller enclosure.				SY	2
	4.3.2	Clean and tighten terminals and connectors. Align contactors.					
	4.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	5.	Perform post overhaul testing of No. 1A, 1B, 2A, and 2B SSTG Circulating Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 25631000022 (Auxiliary Condenser Circulating Pump).				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CIRCULATING AND COOLING SEA WATER	JCN INDICATED BELOW	TITLE
SWLIN 256A03A	TOTAL SHIPYARD COST		EIC GROUP FB01	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL\$ COST\$ ASSGMT PRI

1. Main Circulating Pump No. 1 - Accomplish the following repairs:

1.1 Pump - Overhaul in accordance with TRS 0256-086-\_\_\_ (includes pump assembly and coupling).

SY 2

1.2 Turbine - Overhaul in accordance with TRS 0256-086-\_\_\_.

SY 2

2. Main Circulating Pump No. 2 - Accomplish the following repairs:

2.1 Pump - Overhaul in accordance with TRS 0256-086-\_\_\_ (includes pump assembly and coupling).

SY 2

2.2 Turbine - Overhaul in accordance with TRS 0256-086-\_\_\_.

3. Perform overhaul testing of Main Circulating Pump in accordance with 1200 psi Propulsion Plant Test - Procedure No. 256FB030022 (Main Condenser Circulating Pump).

SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	UPTAKES (INNER CASING)	EIC GROUP	MAINTENANCE AND REPAIR
259A01A	TOTAL SHIPYARD COST	F601	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		Boiler Uptakes No. 1A - Accomplish the following repairs:					
	1.1	Clean uptakes, remove soot deposits, and repair as necessary.				FA	2
	1.2	Renew defective expansion joints.				SY	2
	1.3	Clean and inspect uptake drains.				SY(A) FA(P)	2
	1.4	Repair uptake drains as necessary				SY	2
2.		Boiler Uptakes No. 1B - Accomplish the following repairs:					
	2.1	Clean uptakes, remove soot deposits, and repair as necessary.				FA	2
	2.2	Renew defective expansion joints.				SY	2
	2.3	Clean and inspect uptake drains.				SY(A) FA(P)	2
	2.4	Repair uptake drains as necessary.				SY	2
3.		Boiler Uptakes No. 2A - Accomplish the following repairs:					
	3.1	Clean uptakes, remove soot deposits, and repair as necessary.				FA	2
	3.2	Renew defective expansion joints.				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	259A01*	SYSTEM					
		UPTAKES (INNER CASING)					
	3.3	Clean and inspect uptake drains.				SY (A) FA (P)	2
	3.4	Repair uptake drains as necessary.				SY	2
	4.	Boiler Uptakes No. 2B - Accomplish the following repairs:					
	4.1	Clean uptakes, remove soot deposits, and repair as necessary.				FA	2
	4.2	Renew defective expansion joints.				SY	2
	4.3	Clean and inspect uptake drains.				SY (A) FA (P)	2
	4.4	Repair uptake drains as necessary.				SY	2

NOTE: Additional repairs required to uptakes from economizer flange to top of stack, expansion joints, rain gutters and drains, access plates and covers as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	FUEL SERVICE		MAINTENANCE AND REPAIR
261A01A	TOTAL SHIPYARD COST	EIC GROUP	F500

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
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1. Fuel Oil Service System Duplex Strainer Assemblies - Accomplish a Class "B" overhaul of two (2) fuel oil duplex strainer assemblies to include but not limited to the following:

- 1.1 Polish and lap plug valve.
- 1.2 Machine, true up and refit mating and sealing surfaces.
- 1.3 Replace drain and vent valves.
- 1.4 Hydrostatically test for side-to-side and external leakage.

2. Strainer Spray Shields, Two (2) - Remove strainer spray shields and upon completion of repairs to strainers, install new shields in accordance with NAVSEA specifications.

3. Fuel Oil Quick Closing Valve, Boiler 1A - Accomplish the following repairs:

(Including the valve internals, flanges and operating gear.)

- 3.1 Class "B" overhaul and bench test at system operating pressure using clean fresh water to determine leakage rate. (See Note)

- 3.2 Install flange shields in accordance with current specifications.

SY 2

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM		FUEL SERVICE									
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSGMT	PRI					
261A01*	4.	Fuel Oil Quick Closing Valve, Boiler 1B - Accomplish the following repairs:  (Including the valve internals, flanges and operating gear.)					SY	2					
	4.1	Class "B" overhaul and bench test at system operating pressure using clean fresh water to determine leakage rate. (See Note)											
	4.2	Install flange shields in accordance with current specifications.											
	5.	Fuel Oil Quick Closing Valve, Boiler 2A - Accomplish the following repairs:  (Including the valve internals, flanges and operating gear.)					SY	2					
	5.1	Class "B" overhaul and bench test at system operating pressure using clean fresh water to determine leakage rate. (See Note)											
	5.2	Install flange shields in accordance with current specifications.											
	6.	Fuel Oil Quick Closing Valve, Boiler 2B - Accomplish the following repairs:  (Including the valve internals, flanges and operating gear.)					SY	2					
	6.1	Class "B" overhaul and bench test at system operating pressure using clean fresh water to determine leakage rate. (See Note)											

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
JCN	SWLIN							

## FUEL SERVICE

- 6.2 Install flange shields in accordance with current specifications.

NOTE: Post repair leakage rate criterion is 10cc per hour per inch of nominal valve size for valves one inch and larger and 10cc per hour total for valve sizes less than one inch.

7. Test fuel oil service system in accordance with 1200 psi Propulsion Plant Test Procedure No. 261F5070022 (Fuel Oil Service System).

SY

2

Inspection - Phase I

Flush - Phase I

Pressure Test - Phase I

Operation - Phase III

NOTE: Additional repairs required to piping, valves and fittings from service tanks to and including manifolds, pressure regulators, port use equipment, fuel tank (when not built into hull structure) as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FUEL SERVICE	JCN INDICATED BELOW	TITLE
SWLIN	261A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			F503	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		Fuel Oil Service Pump No. 1A - Accomplish the following repairs:					
	1.1	Pump - Overhaul in accordance with TRS 0261-086-___ (includes pump assembly and coupling).				SY	2
	1.1.1	Pump Discharge Relief Valve - Accomplish Class "B" overhaul and set.					
	1.1.2	Suction and Discharge Gages - Repair and calibrate.					
	1.2	Turbine - Overhaul in accordance with TRS 0261-086-___.				SY	2
2.		Fuel Oil Service Pump No. 1B - Accomplish the following repairs:					
	2.1	Pump - Overhaul in accordance with TRS 0261-086-___ (includes pump and coupling).				SY	2
	2.1.1	Pump Discharge Relief Valve - Accomplish Class "B" overhaul and test.					
	2.1.2	Suction and Discharge Gages - Repair and calibrate.					
	2.2	Turbine - Overhaul in accordance with TRS 0261-086-___.				SY	2

## SHIP SYSTEM WORK DESCRIPTION

JCN ITEM #

- NOTE:** SHIPALT DDG-37-1069K modifies or replaces relief valves from 1000 to 350 psi settings.

**NOTE:** SHIPALT DDG-37-1069K modifies or replaces relief valves from 1000 to 350 psi settings.

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #
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SWLIN

SWLIN  
261A02\*

## SYSTEM

**FUEL SERVICE**

DESCRIPTION

5.

Perform post overhaul testing of No. 1A, 1B, 2A and 2B Fuel Oil Service Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 261F5010022 (Fuel Oil Service Pumps).

**NOTE:**

Additional repairs required in this SWLIN (including in-port service pump motor and controller) as a result of the POTGI are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	MAIN PROPULSION LUBE OIL	EIC GROUP	MAINTENANCE AND REPAIR
262A01A	TOTAL SHIPYARD COST	FD00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Main Lube Oil Cooler No. 1 - Accomplish Class "B" overhaul to include but not limited to:

1.1 Clean and hydrostatically test main lube oil cooler assembly oil and watersides.

1.2 Replace plugged or leaking tubes.

1.3 Replace seals and gaskets, replace defective or deteriorated fasteners.

1.4 Gages and Thermometers - Repair and calibrate.

2. Main Lube Oil System Duplex Strainer No. 1 - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes inlet and outlet gages and tubing, drain and vent valves, plug valve, strainer internals.)

2.1 Polish, lap and refit plug valve.

2.2 Machine, true up and refit mating surfaces.

2.3 Replace broken or missing magnets and repair strainer baskets.

2.4 Repair vent and drain valves to conform to latest requirements for flammable systems.

2.5 Hydrostatically test strainer assembly for side-to-side and external leakage.

2.6 Inlet and Outlet Gages - Repair and calibrate.

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	MAIN PROPULSION LUBE OIL				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	262A01*						
	3.	Main Lube Oil Cooler No. 2 - Accomplish Class "B" overhaul to include but not limited to:				SY	2
	3.1	Clean and hydrostatically test main lube oil cooler assembly oil and watersides.					
	3.2	Replace plugged or leaking tubes.					
	3.3	Replace seals and gaskets, replace defective or deteriorated fasteners.					
	3.4	Gages and Thermometers - Repair and calibrate.					
	4.	Main Lube Oil System Duplex Strainer No. 2 - Accomplish a Class "B" overhaul to include but not limited to the following:  (Includes inlet and outlet gages and tubing, drain and vent valves, plug valve, strainer internals.)				SY	2
	4.1	Polish, lap and refit plug valve.					
	4.2	Machine, true up and refit mating surfaces.					
	4.3	Replace broken or missing magnets and repair strainer baskets.					
	4.4	Repair vent and drain valves to conform to latest requirements for flammable systems.					
	4.5	Hydrostatically test strainer assembly for side-to-side and external leakage.					
	4.6	Inlet and Outlet Gages - Repair and calibrate.					

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
262A02A	MAIN PROPULSION LUBE OIL		MAINTENANCE AND REPAIR
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
		FD03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
1.		Main Lube Oil Service Standby Pump No. 1A - Accomplish the following repairs:					
	1.1	Pump - Overhaul in accordance with TRS 0262-086-___ (includes pump assembly and coupling).				SY	2
	1.1.1	Suction and Discharge Gages - Repair and calibrate.					
	1.2	Motor - Overhaul in accordance with TRS 0262-086-___.				SY	2
2.		Main Lube Oil Service Standby Pump No. 1B - Accomplish the following repairs:					
	2.1	Pump - Overhaul in accordance with TRS 0262-086-___ (includes pump assembly and coupling).				SY	2
	2.1.1	Suction and Discharge Gages - Repair and calibrate.					
	2.2	Turbine - Overhaul in accordance with TRS 0262-086-___.				SY	2
3.		Main Lube Oil Service Standby Pump No. 2A - Accomplish the following repairs:					
	3.1	Pump - Overhaul in accordance with TRS 0262-086-___ (includes pump assembly, coupling, and motor bracket).				SY	2
	3.1.1	Suction and Discharge Gages - Repair and calibrate.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN		SYSTEM					
262A02*		MAIN PROPULSION LUBE OIL					

- 3.2 Motor - Overhaul in accordance with TRS 0262-086-\_\_\_\_.
4. Main Lube Oil Service Standby Pump No. 2B - Accomplish the following repairs:
- 4.1 Pump - Overhaul in accordance with TRS 0262-086-\_\_\_\_ (includes pump assembly and coupling).
- 4.1.1 Suction and Discharge Gages - Repair and calibrate.
- 4.2 Turbine - Overhaul in accordance with TRS 0262-086-\_\_\_\_.
5. Attached Lube Oil Service Pump No. 1 - Overhaul in accordance with TRS 0262-086-\_\_\_\_.
6. Attached Lube Oil Service Pump No. 2 - Overhaul in accordance with TRS 0262-086-\_\_\_\_.
7. Perform post overhaul testing of No. 1A, 1B, 2A, and 2B Main Lube Oil Service Standby Pump in accordance with 1200 psi Propulsion Plant Test Procedure No. 262FD010022 (Main Lube Oil Service Pumps).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	MAIN PROPULSION LUBE OIL	EIC GROUP	MAINTENANCE AND REPAIR
262A04A	TOTAL SHIPYARD COST	FD07	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Lube Oil Purifier No. 1 - Accomplish the following repairs:

1.1 Purifier - Overhaul in accordance with TRS 0262-086-\_\_\_\_ (includes pedestal and purifier assembly).

SY 2

1.1.1 Replace four (4) resilient mounts (not included in TRS).

1.1.2 Replace four (4) 90 degree flexible hose assemblies (two (2) hoses per assembly) and one (1) single flexible hose (not included in TRS).

1.2 Motor - Overhaul in accordance with TRS 0262-086-\_\_\_\_.

SY 2

1.3 Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

1.4 Inlet Pressure Gage and Inlet Thermometer - Repair and calibrate.

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	MAIN PROPULSION LUBE OIL						
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT	PRI
	262A04*								
	2.	Lube Oil Purifier No. 2 - Accomplish the following repairs:							
	2.1	Purifier - Overhaul in accordance with TRS 0262-086-___ (includes pedestal and purifier assembly).						SY	2
	2.1.1	Replace four (4) resilient mounts (not included in TRS).							
	2.1.2	Replace four (4) 90 degree flexible hose assemblies (two (2) hoses per assembly) and one (1) single flexible hose (not included in TRS).							
	2.2	Motor - Overhaul in accordance with TRS -262-086-___.						SY	2
	2.3	Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						SY	2
	2.3.1	Clean and preserve controller enclosure.							
	2.3.2	Clean and tighten terminals and connectors. Align contactors.							
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.							
	2.4	Inlet Pressure Gage and Inlet Thermometer - Repair and calibrate.						SY	2



# SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET		SYSTEM		MAIN PROPULSION LUBE OIL			
SWLIN	262A04*	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI
JCN							

3. Perform post overhaul testing of lube oil purifier No. 1 and No. 2 in accordance with 1200 psi Propulsion Plant Test Procedure No. 262FD070012 (Lube Oil Centrifugal Purifier).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

PART 3.3

MAJOR SHIP SYSTEM 3

MAJOR SHIP SYSTEM 3 - ELECTRIC PLANT

311	SHIPS SERVICE POWER GENERATION
312	EMERGENCY GENERATORS
314	POWER CONVERSION EQUIPMENT
324	SWITCHGEAR AND PANELS
341	SSTG LUBE OIL SYSTEM
342	DIESEL SUPPORT SYSTEMS



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SHIPS SERVICE POWER GENERATION	JCN INDICATED BELOW	TITLE
SWLIN	311A01A	TOTAL SHIPYARD COST	EIC GROUP	310C

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Ships Service Turbogenerator Set, 60 Hz, No. 1A:

1.1 Turbine - Accomplish the following repairs:

1.1.1 Steam Admission Valve (Steam Chest Cover, Valve) and Linkage Assembly - Overhaul in accordance with applicable portions of TRS 0311-086-\_\_\_\_.

1.1.2 Throttle Valve and Steam Strainer - Class "B" Overhaul.

1.1.3 Turbine Thrust - Reset in accordance with criteria established in TRS 0311-086-\_\_\_\_.

1.1.4 Overspeed Trip - Reset in accordance with criteria established in TRS 0311-086-\_\_\_\_.

1.2 Turbine and Reduction Gear, Panel Mounted Gages - Calibrate.

1.3 Generator - Accomplish the following repairs:

1.3.1 Stator Windings - Clean (on ship).

1.3.2 Slip Rings - Polish and true up.

1.3.3 Brush Holders and Brushes - Clean holders and replace brushes in accordance with applicable portions of TRS 0311-086-\_\_\_\_.

SY      2

SY      2

SY      2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 311A01*		SYSTEM	SHIPS SERVICE POWER GENERATION					
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSGMT PRI
	1.3.4	Journal Bearings - Replace in accordance with TRS 0311-086-_____.						
	1.4	Tachometer - Class "B" overhaul to include cleaning, inspecting and calibration as a minimum.						SY 2
	2.	Ships Service Turbogenerator Set 60 Hz, No. 1B:						
	2.1	Turbine - Accomplish the following repairs:						SY 2
	2.1.1	Steam Admission Valve (Steam Chest Cover, Valve) and Linkage Assembly - Overhaul in accordance with applicable portions of TRS 0311-086-_____.						
	2.1.2	Throttle Valve and Steam Strainer - Class "B" Overhaul.						
	2.1.3	Turbine Thrust - Reset in accordance with criteria established in TRS 0311-086-_____.						
	2.1.4	Overspeed Trip - Reset in accordance with criteria established in TRS 0311-086-_____.						
	2.2	Turbine and Reduction Gear, Panel Mounted Gages - Calibrate.						SY 2
	2.3	Generator - Accomplish the following repairs:						
	2.3.1	Stator Windings - Clean (on ship).						
	2.3.2	Slip Rings - Polish and true up.						SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 311A01*		SYSTEM	SHIPS SERVICE POWER GENERATION						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		
	2.3.3	Brush Holders and Brushes - Clean holders and replace brushes in accordance with applicable portions of TRS 0311-086-____.							
	2.3.4	Journals Bearings - Replace in accordance with TRS 0311-086-____.							
	2.4	Tachometer - Class "B" overhaul to include cleaning, inspecting and calibration as a minimum.				SY	2		
	3.	Ships Service Turbogenerator Set, 60 Hz, No. 2A:							
	3.1	Turbine - Accomplish the following repairs:							
	3.1.1	Steam Admission Valve (Steam Chest Cover, Valve) and Linkage Assembly - Overhaul in accordance with applicable portions of TRS 0311-086-____.				SY	2		
	3.1.2	Throttle Valve and Steam Strainer - Class "B" overhaul.							
	3.1.3	Turbine Thrust - Reset in accordance with criteria established in TRS 0311-086-____.							
	3.1.4	Overspeed Trip - Reset in accordance with criteria established in TRS 0311-086-____.							
	3.2	Turbine and Reduction Gear, Panel Mounted Gages - Calibrate.				SY	2		
	3.3	Generator - Accomplish the following repairs:							
	3.3.1	Stator Windings - Clean (on ship).				SY	2		



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN		ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 311A01*		SYSTEM		SHIPS SERVICE POWER GENERATION				
		3.3.2	Slip Rings - Polish and true up.					
		3.3.3	Brush Holders and Brushes - Clean holders and replace brushes in accordance with applicable portions of TRS 0311-086-____.					
		3.3.4	Journal Bearings - Replace in accordance with TRS 0311-086-____.					
	3.4		Tachometer - Class "B" overhaul to include cleaning, inspecting, and calibration as a minimum.				SY	2
	4.		Ships Service Turbogenerator Set, 60 Hz, No. 2B:					
	4.1		Turbine - Accomplish the following repairs:				SY	2
	4.1.1		Steam Admission Valve (Steam Chest Cover, Valve) and Linkage Assembly - Overhaul in accordance with applicable portions of TRS 0311-086-____.					
	4.1.2		Throttle Valve and Steam Strainer - Class "B" Overhaul.					
	4.1.3		Turbine Thrust - Reset in accordance with criteria established in TRS 0311-086-____.					
	4.1.4		Overspeed Trip - Reset in accordance with criteria established in TRS 0311-086-____.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 311A01*		SYSTEM	SHIPS SERVICE POWER GENERATION				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	4.2	Turbine and Reduction Gear, Panel Mounted Gages - Calibrate				SY	2
	4.3	Generator - Accomplish the following repairs:					
	4.3.1	Stator Windings - Clean (on ship).				SY	2
	4.3.2	Slip Rings - Polish and true up.					
	4.3.3	Brush Holders and Brushes - Clean holders and replace brushes in accordance with applicable portions of TRS 0311-086-____.					
	4.3.4	Journal Bearings - Replace in accordance with TRS 0311-086-____.					
	4.4	Tachometer - Class "B" overhaul.				SY	2
5.		Perform post overhaul testing of No. 1A, 1B, 2A, and 2B Ships Service Turbogenerators in accordance with 1200 psi Propulsion Plant Test Procedure No. 311310C0022 (Ships Service Turbogenerator). Test includes SSTG Lube Oil Systems, SWLIN 341A01*.				SY	2

NOTE: Meter repairs and calibration covered in SWLIN 324A01\*.

NOTE: SSTG Lube Oil System repairs covered in SWLIN 341A01\*.

NOTE: Additional repairs required to turbine assembly, speed reduction gear assembly, generator, or generator air cooler (does not include lube oil system and pumps, non-integral condensers or pumps) as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	EMERGENCY GENERATORS		MAINTENANCE AND REPAIR
312A01A	TOTAL SHIPYARD COST	EIC GROUP 3301	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Emergency Diesel Generator Engine No. 1 - Accomplish the following repairs:					
	1.1	Speed Control and Regulating System - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	1.1.1	Hydraulic governor and actuator.					
	1.1.2	Load and frequency sensors and amplifier.					
	1.1.3	Mechanical linkage.					
	1.2	Fuel Injectors - Accomplish the following repairs:				SY	2
	1.2.1	Clean, adjust and set.					
	1.3	Gages, Tachometers, Pyrometers, Meters, and Thermometers - Calibrate.				SY	2
	2.	Emergency Diesel Generator Engine No. 2 - Accomplish the following repairs:					
	2.1	Speed Control and Regulating System - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.1.1	Hydraulic governor and actuator.					
	2.1.2	Load and frequency sensors and amplifier.					
	2.1.3	Mechanical linkage.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 312A01*		SYSTEM	EMERGENCY GENERATORS				
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSGMT PRI
	2.2	Fuel Injectors - Accomplish the following repairs:					SY 2
	2.2.1	Clean, adjust, and set.					
	2.3	Gages, Tachometers, Pyrometers, Meters, and Thermometers - Calibrate.					SY 2
	3.	Emergency Diesel Generator No. 1 - Accomplish the following repairs:					
	3.1	Commutators and Slip Rings - Clean and polish (in place).					SY 2
	3.2	Brush Rigging and Brushes - Clean and adjust rigging, and replace brushes.					SY 2
	3.3	Journal Bearings - Inspect bearings and replace as necessary.					SY 2
	4.	Emergency Diesel Generator No. 2 Accomplish the following repairs:					
	4.1	Commutators and Slip Rings - Clean and polish (in place).					SY 2
	4.2	Brush Rigging and Brushes - Clean and adjust rigging, and replace brushes.					SY 2
	4.3	Journal Bearings - Inspect bearings and replace as necessary.					SY 2
	5.	Perform post overhaul testing of Emergency Diesel Generator Set No. 1 and 2 in accordance with 1200 psi Propulsion Plant Test Procedure No. 31233010022 (Emergency Generator). Test includes support systems SWLIN 342A01*.					SY 2

# SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN 312A01*	SYSTEM	EMERGENCY GENERATORS	
JCN	ITEM #	DESCRIPTION	M/D    MATL \$    COST \$    ASSIGMT    PRI

NOTE: Additional repairs required to engine assembly, scavenging air blowers, clutch and power transmission assembly, fuel pump (attached) and filters, generator assembly and excitation system, attached lube oil filter assembly, manual controls and exhaust temperature pyrometer (if installed) (does not include heat exchanger, lube oil coolers, air starting system, sea water circulating pump and system, exhaust piping, air inlet piping and silencer) as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	POWER CONVERSION EQUIPMENT	JCN INDICATED BELOW	TITLE
SWLIN		TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
314A01A			4700	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Motor Generator Set, 200 KW, 400 Hz - Accomplish a Class "B" overhaul to three (3) MG sets to include but not limited to the following:

(Include voltage/frequency regulator and controller.)

1.1 Slip Rings - Clean and polish.

1.2 Brush Rigging and Brushes - Clean and adjust rigging, and replace brushes.

1.3 Journal Bearings - Inspect and replace as necessary.

2. Motor Generator Set, 60 KW, 400 Hz - Accomplish the following repairs to six (6) MG sets:

2.1 Slip Rings - Clean and polish (in place).

2.2 Brush Rigging and Brushes - Clean and adjust rigging, and replace brushes.

2.3 Journal Bearings - Inspect and replace as necessary.

3. Motor Generator Set, 3KW, 250 VDC - Accomplish the following repairs to four (4) MG sets:

3.1 Slip Rings - Clean and polish (in place).

3.2 Brush Rigging and Brushes - Clean and adjust rigging, and replace brushes.

3.3 Journal Bearings - Inspect and replace as necessary.

SY 2

SY 2

SY 2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	POWER CONVERSION EQUIPMENT					
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI

4. PU-491/USQ or PU-655/USQ-20 Motor Generator -  
Accomplish the following repairs:

4.1 Class "B" Overhaul            motor  
generator sets to include but not be  
limited to the following:

4.1.1 Slip Rings - Clean and polish.

4.1.2 Brush Rigging and Brushes - Clean  
and adjust rigging, and replace  
brushes.

4.1.3 Journal Bearings - Inspect and  
replace, as necessary.

4.1.4 Stator and Rotor - Clean and inspect  
windings; take insulation readings;  
rewind, dip, bake and bench test as  
necessary.

- 4.2 C-3414/USQ-20 MG Controller - Class "B"  
overhaul            MG controllers to  
include but not be limited to:

4.2.1 Clean and preserve enclosure.

4.2.2 Clean and tighten all terminals and  
connectors; align contactors.

4.2.3 Replace all defective or deteriorated  
wiring and components within the  
controller enclosure.

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	314A01*						
JCN	ITEM #						

5. AN/SQS-23 Sonar System Motor Generator Set -  
Inspect and load test all motor generator sets  
(average quantity of 10), including the following:

- 5.1 PU-444/SQ.
- 5.2 PU-455/SQ.
- 5.3 PU-461/SQ.
- 5.4 PU-477/SQ.
- 5.5 PU-478/SQ.
- 5.6 PU-479 ( )/SQ.
- 5.7 PU-485/SQ.
- 5.8 PU-519/SQ.

6. AN/SQQ-23 Sonar System Motor Generator Set - Inspect  
and load test all motor generator sets to include the  
following:

- 6.1 PU-444/SQ.

NOTE: Additional repairs required in this SWLIN as a result  
of the POT&I are as follows:

SY 2

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SWITCHGEAR AND PANELS	JCN INDICATED BELOW	TITLE
SWLIN	324A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			4100	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Switchboards and Panels					
	1.1	Switchboard No. 1S - Accomplish the following repairs:				SY	2
	1.1.1	Repair or replace as required and calibrate all meters.					
	1.1.2	Clean and inspect circuit breakers and static power supplies.					
	1.2	Switchboard No. 2S - Accomplish the following repairs:				SY	2
	1.2.1	Repair or replace as required and calibrate all meters.					
	1.2.2	Clean and inspect circuit breakers and static power supplies.					
	1.3	Emergency Power Switchboard - Accomplish repairs to include but not limited to the following:				SY	2
	1.3.1	Repair or replace as required and calibrate all meters.					
	1.3.2	Clean and inspect circuit breakers and static power supplies.					
	1.4	Degaussing Switchboard - Clean all circuit breakers.				FA	2
	2.	Electric Power Distribution ABT's - Clean all bus transfer units.				FA	2



CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	324A01*		SWITCHGEAR AND PANELS					

NOTE: Additional repairs required to circuit breakers, switches, S/S switchboard, emergency switchboards, panels, (does not include propulsion control switchboards, weapons control switchboards, I.C. switchboards) as a result of the POT&I are as follows:

140

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SSTG LUBE OIL	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATLS COST \$ ASSIGMT PRI

1. Ships Service Turbogenerator Lube Oil System, No. 1A - Accomplish the following repairs:

1.1 Attached, Auxiliary and Hand Operated Lube Oil Pumps - Overhaul in accordance with applicable portions of TRS 0311-086-\_\_\_\_.

SY 2

1.2 Auxiliary Lube Oil Pump Motor - Class "B" overhaul.

SY 2

1.3 Auxiliary Lube Oil Pump Controller - Class "B" overhaul to include but not limited to:

SY 2

1.3.1 Clean and preserve enclosure.

1.3.2 Clean and tighten all terminals and connectors, align contactors.

1.3.3 Replace all defective or deteriorated wiring and components within the controller enclosure.

1.4 Duplex Lube Oil Strainer - Overhaul in accordance with applicable portions of TRS 0311-086-\_\_\_\_.

SY 2

1.4.1 Vent and Drain Valves - Repair to conform with latest requirements for flammable systems.

1.5 Duplex Strainer Shield - Remove and store strainer spray shield, upon completion of repairs to strainer reinstall shield in accordance with NAVSEA specifications.

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 341A01*			SSTG LUBE OIL					
	2.		Ships Service Turbogenerator Lube Oil System, No. 1B - Accomplish the following repairs:					
	2.1		Attached, Auxiliary and Hand Operated Lube Oil Pumps - Overhaul in accordance with applicable portions of TRS 0311-086-____.				SY	2
	2.2		Auxiliary Lube Oil Pump Motor - Class "B" overhaul.				SY	2
	2.3		Auxiliary Lube Oil Pump Controller - Class "B" overhaul to include but not limited to:				SY	2
	2.3.1		Clean and preserve enclosure.					
	2.3.2		Clean and tighten all terminals and connectors, align contactors.					
	2.3.3		Replace all defective or deteriorated wiring and components within the controller enclosure.					
	2.4		Duplex Lube Oil Strainer - Overhaul in accordance with applicable portions of TRS 0311-086-____.				SY	2
	2.4.1		Vent and Drain Valves - Repair to conform with latest requirements for flammable systems.					
	2.5		Duplex Strainer Shield - Remove and store strainer spray shield, upon completion of repairs to strainer reinstall shield in accordance with NAVSEA specifications.				SY	2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 341A01*			SSTG LUBE OIL					
	3.		Ships Service Turbogenerator Lube Oil System, No. 2A - Accomplish the following repairs:					
	3.1		Attached, Auxiliary and Hand Operated Lube Oil Pumps - Overhaul in accordance with applicable portions of TRS 0311-086-___.				SY	2
	3.2		Auxiliary Lube Oil Pump Motor - Class "B" overhaul.				SY	2
	3.3		Auxiliary Lube Oil Pump Controller - Class "B" overhaul to include but not limited to:				SY	2
	3.3.1		Clean and preserve enclosure.					
	3.3.2		Clean and tighten all terminals and connectors, align contactors.					
	3.3.3		Replace all defective or deteriorated wiring and components within the controller enclosure.					
	3.4		Duplex Lube Oil Strainer - Overhaul in accordance with applicable portions of TRS 0311-086-___.				SY	2
	3.4.1		Vent and Drain Valves - Repair to conform with latest requirements for flammable systems.					
	3.5		Duplex Strainer Shield - Remove and store strainer spray shield, upon completion of repairs to strainer reinstall shield in accordance with NAVSEA specifications.				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 341A01*		SYSTEM	SSTG LUBE OIL				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	4.	Ships Service Turbogenerator Lube Oil System, No. 2B - Accomplish the following repairs:					
	4.1	Attached, Auxiliary and Hand Operated Lube Oil Pumps - Overhaul in accordance with applicable portions of TRS 0311-086-____.				SY	2
	4.2	Auxiliary Lube Oil Pump Motor - Class "B" overhaul.				SY	2
	4.3	Auxiliary Lube Oil Pump Controller - Class "B" overhaul to include but not limited to:				SY	2
	4.3.1	Clean and preserve enclosure.					
	4.3.2	Clean and tighten all terminals and connectors, align contactors.					
	4.3.3	Replace all defective or deteriorated wiring and components within the controller enclosure.					
	4.4	Duplex Lube Oil Strainer - Overhaul in accordance with applicable portions of TRS 0311-086-____.				SY	2
	4.4.1	Vent and Drain Valves - Repair to conform with latest requirements for flammable systems.					
	4.5	Duplex Strainer Shield - Remove and store strainer spray shield, upon completion of repairs to strainer reinstall shield in accordance with NAVSEA specifications.				SY	2

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN	SYSTEM	SSTG LUBE OIL	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
341A01*									

NOTE: Post overhaul testing of No. 1A, 1B, 2A, and 2B Auxiliary Lube Oil Pumps covered in SWLIN 311A01\* with 1200 psi Propulsion Plant Test Procedure No. 311310C0022 (Ships Service Turbogenerator).

NOTE: Additional repairs required to sump tanks, electrostatic precipitators, lube oil cooler, filters, orifice plates, sight glasses, pressure and thermostatic switches, accumulators, and "oil piping" to bearings, governor and speed control systems and trips as a result of POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DIESEL SUPPORT		MAINTENANCE AND REPAIR
342A01A	TOTAL SHIPYARD COST	EIC GROUP	3300

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
1.		Emergency Diesel Generator Support Systems - 60 Hz - Accomplish the following repairs:					
	1.1	Sea Water Circulating Pump No. 1 - Overhaul in accordance with TRS 0311-086-____.				SY	2
	1.1.1	Replace four (4) resilient mounts (not in TRS).					
	1.1.2	Replace suction and discharge 90 degree flex hoses.					
	1.2	Sea Water Circulating Pump Motor - Overhaul in accordance with TRS 0311-086-____.				SY	2
	1.3	EDG Engine No. 1 Fresh Water/Sea Water Heat Exchanger - Accomplish repairs to include but not limited to the following:				SY	2
	1.3.1	Chemically clean sea water and fresh water sides.					
	1.3.2	Visually inspect.					
	1.3.3	Hydrostatically test and repair any leakage found.					
	1.4	EDG Engine No. 1 Lube Oil Cooler - Accomplish repairs to include but not limited to the following:				SY	2
	1.4.1	Chemically clean water and oil sides.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	DIESEL SUPPORT			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT PRI
	1.4.2	Visually inspect.				
	1.4.3	Hydrostatically test, repair leakage found. (Replace leaking cooler cores.)				
	1.5	Sea Water Circulating Pump No. 2 - Overhaul in accordance with TRS 0311-086-_____.				SY 2
	1.5.1	Replace four (4) resilient mounts (not in TRS).				
	1.5.2	Replace suction and discharge 90 degree flex hoses.				
	1.6	Sea Water Circulating Pump Motor - Overhaul in accordance with TRS 0311-086-_____.				SY 2
	1.7	EDG Engine No. 2 Fresh Water/Sea Water Heat Exchanger - Accomplish repairs to include but not limited to the following:				SY 2
	1.7.1	Chemically clean sea water and fresh water sides.				
	1.7.2	Visually inspect.				
	1.7.3	Hydrostatically test and repair any leakage found.				
	1.8	EDG Engine No. 2 Lube Oil Cooler - Accomplish repairs to include but not limited to the following:				SY 2
	1.8.1	Chemically clean water and oil sides.				

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #						
SWLIN 342A01*		DIESEL SUPPORT					
	1.8.2	Visually inspect.					
	1.8.3	Hydrostatically test, repair leakage found. (Replace leaking cooler cores.)					
	NOTE:	Diesel support systems testing covered in SWLIN 312A01*.					
	NOTE:	Sea Valve repairs covered in SWLIN 520A01*.					
	NOTE:	Additional repairs required to sea water piping, lube oil service and transfer piping, fuel oil suction and return piping, non-built-in fuel and water tanks, air starting piping, valves and motors, air inlet and exhaust piping with silencers and mufflers as a result of the POT&I are as follows:					



PART 3.4

MAJOR SHIP SYSTEM 4

MAJOR SHIP SYSTEM 4 - COMMAND AND SURVEILLANCE

410 COMMAND AND CONTROL

411 DATA DISPLAY GROUP

412 DATA PROCESSING GROUP

413 DIGITAL DATA SWITCHBOARDS

415 DIGITAL DATA COMMUNICATIONS

421 NON-ELECTRICAL/ELECTRONIC NAVIGATION AIDS

422 ELECTRICAL NAVIGATION AIDS

423 ELECTRONIC NAVIGATION SYSTEMS, RADIO

424 ELECTRONIC NAVIGATION SYSTEMS, ACOUSTICAL

426 ELECTRICAL NAVIGATION SYSTEMS

432 TELEPHONE SYSTEMS

436 ALARM, SAFETY AND WARNING SYSTEMS

437 INDICATING, ORDER AND METERING SYSTEMS

441 RADIO SYSTEMS

445 TELETYPE AND FACSIMILE SYSTEMS

446 SECURITY EQUIPMENT

450 SURVEILLANCE SYSTEMS, SURFACE

451 SURFACE SEARCH RADAR

452 AIR SEARCH RADAR

MAJOR SHIP SYSTEM 4 - COMMAND AND SURVEILLANCE (CON'T)

453	AIR SEARCH RADAR (3D)
455	IDENTIFICATION SYSTEMS (IFF)
461	ACTIVE SONAR
463	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR
471	ACTIVE ECM
472	PASSIVE ECM
475	DEGAUSSING
481	GUN FIRE CONTROL SYSTEM
482	FIRE CONTROL SYSTEMS (NON-SONAR DATA BASE)
483	FIRE CONTROL SYSTEMS (SONAR DATA BASE)
491	ELECTRONIC TEST, CHECKOUT AND MONITORING EQUIPMENT



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMMAND AND CONTROL	JCN INDICATED BELOW	TITLE	JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN	410A01A	TOTAL SHIPYARD COST	EIC GROUP	5LZ8								

1. MK 74 TDT and Control Unit - Accomplish a class "B" overhaul to two (2) TDTs and two (2) control units.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DATA DISPLAY GROUP	JCN INDICATED BELOW	TITLE
SWLIN	411A03A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			QM06	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

2

SY

1. AN/UYA-4 (V) Data Display Group (NTDS) - Accomplish a class "B" overhaul to the following components:

1.1 OA-7979/UYA-4 PPI consoles (approximately 13-15).

1.2 OA-7980/UYA-4 HT SE console (1).

1.3 CV-2095(V)/UYA-4(V) AD converters (approximately 2-3).

1.4 LS-537A/UYA-4 remote intercom units (approximately 4-7).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DATA PROCESSING GROUP	JCN INDICATED BELOW	TITLE
SWLIN	412A01A	TOTAL SHIPYARD COST	EIC GROUP QK00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. AN/USQ-20(V) Converter - Accomplish a class "B" overhaul to the following components:

- 1.1 RD-243/USQ-20 magnetic tape unit.
- 1.2 CP-642( )/USQ-20(V) digital computer (2-3 units).
- 1.3 OA-7781/USQ-20(V) WCP Group (0-3 units).
- 1.4 CV-2036/USQ-20 Digital Converter (1-2 units).
- 1.5 MT-3574B/USQ-20 DSDS Base.
- 1.6 RD-231/USQ-20(V) Recorder Reproducer.

2. CP-789(V) UYK Digital Computer - Accomplish a class "B" overhaul (1-2 units).

3. CV-2517(A/B)/UYK D/A Converter - Accomplish a class "B" overhaul (5-7 units).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SY 2



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DIGITAL DATA SWITCHBOARDS	JCN INDICATED BELOW	TITLE
SWLIN	413A01A	TOTAL SHIPYARD COST	EIC GROUP	Q000
JCN	ITEM #	DESCRIPTION	M/D	MATLS
				COST \$
				ASSIGMT
				PRI

1. SB-2780/UYA-4 Radar Switch - Accomplish a class "B" overhaul to two (2) switches.

SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DIGITAL DATA COMMUNICATIONS	JCN INDICATED BELOW	TITLE
SWLIN	415A01A	TOTAL SHIPYARD COST	EIC GROUP QH08	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSGMT	PRI
	1.	AN/USQ-36(V) Data Terminal Set - Accomplish a class "B" overhaul to the data terminal set.				SY	2
	2.	AN/SRC-31( ) UHF Data Transceivers - Accomplish a class "B" overhaul to _____ Data Transceivers.				SY	2
	3.	AN/SRC-23( ) (V) Radio Set - Accomplish a class "B" overhaul to two (2) Radio Sets.				SY	2
	4.	AN/SRC-34( ) (V) Coupler - Accomplish a class "B" overhaul to _____ couplers to include the CU-1169/SRC-16 antenna coupler.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	NON ELECTRICAL/ELECTRONIC NAVIGATION AIDS	JCN INDICATED BELOW	TITLE
SWLIN	421A01A	TOTAL SHIPYARD COST	EIC GROUP LF00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Alidades - Calibrate five (5) alidades.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

FA 2



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	NON ELECTRICAL/ ELECTRONIC NAVIGATION AIDS	JCN INDICATED BELOW	TITLE
SWLIN	421A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			LG00	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Magnetic Compass - Accomplish compensation of two (2) compasses.

1.1      One (1) compass on bridge.

1.2      One (1) compass at secondary conn.

NOTE:      Additional repairs required to binnacles, heeling and corrector magnets and holder as a result of the POT&I are as follows:

SY(A) FA(P) 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ELECTRICAL NAVIGATION AIDS	EIC GROUP	MAINTENANCE AND REPAIR
	TOTAL SHIPYARD COST		
422A01A		LJ00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
						SY	2

1. Navigation Lights - Inspect navigation lights for proper arc and range of visibility and certify.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ELECTRONIC NAVIGATION SYSTEMS, RADIO	EIC GROUP	MAINTENANCE AND REPAIR
423A02A	TOTAL SHIPYARD COST	L603	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	AN/SRN-6( ) TACAN - Accomplish a class "B" overhaul.				SY	2

(Includes OA-7203( )/URN-20(V) antenna group.)

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

160



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ELECTRONIC NAVIGATION SYSTEMS, RADIO	EIC GROUP	MAINTENANCE AND REPAIR
423A03A	TOTAL SHIPYARD COST	N900	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. AN/URD-4( ) UHF-DF - Accomplish a class "B" overhaul (includes AS-514( )/URD-4 antenna.)

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ELECTRONIC NAVIGATION, ACOUSTICAL	JCN INDICATED BELOW	TITLE
SWLIN	424A01A	TOTAL SHIPYARD COST	EIC GROUP R500	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. AN/UQN-1( ) Sonar Sounder Set - Accomplish the following repairs:

1.1 Remove existing transducer and install a new AT-200( )UQN-1 transducer.

1.2 Class "B" overhaul the sonar sounder set.

NOTE: Additional repairs required to fathometer, depth indicators and interconnecting wiring as a result of the POT&I are as follows:

SY 2

SY 2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER		SYSTEM	JCN INDICATED BELOW		TITLE				
		ELECTRICAL NAVIGATION SYSTEMS			MAINTENANCE AND REPAIR				
SWLIN		TOTAL SHIPYARD COST	EIC GROUP						
426A01A			LB00						
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSGMT	PRI

1. MK 19 Gyro Compass - Accomplish a Class "B" overhaul to two (2) compasses to include but not limited to the following:

(Includes gyro compass, binnacle, control cabinets, power supplies, five ship control synchro signal amplifiers, stands, operating gear and integral lighting).

- 1.1 Replace brushes on meridian and slave gyro.
- 1.2 Clean slip rings on meridian and slave gyro.
- 1.3 Conduct a scorsby test.
- 1.4 Overhaul the following ship control synchro signal amplifiers:
  - 1.4.1 One (1) Roll
  - 1.4.2 One (1) Pitch
  - 1.4.3 One (1) No. 1 Control
  - 1.4.4 One (1) No. 2 Torque
  - 1.4.5 One (1) No. 3 Miscellaneous

NOTE: Other shipboard synchro amplifiers not covered in item 1.4 will be repaired with their system.

2. MK 19 Gyro Compass Repeaters - Accomplish a Class "B" overhaul of all MK 19 repeaters.

SY 2



# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION	
SWLIN 426A01*	SYSTEM ELECTRICAL NAVIGATION SYSTEMS

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	3.	Perform an overhaul shipboard test of the MK 19 Gyro Compass System (Ckt 1c) to include associated indicators, synchro signal amplifiers, synchro overload devices, etc.; including an inspection, insulation resistance/continuity check, alignment check and operational/accuracy checks in accordance with TP _____.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ELECTRICAL NAVIGATION SYSTEMS	JCN INDICATED BELOW	TITLE
SWLIN	426A02A	TOTAL SHIPYARD COST	EIC GROUP LC01	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSGMT	PRI
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1. Underwater Log System - Accomplish a Class "B" overhaul.

(Includes sea valves and packing assembly, rod meter, remote control unit, indicator transmitter, five (5) speed indicators and one (1) distance indicator.)

2. Perform a post repair shipboard test of the underwater log system that includes insulation resistance/continuity checks, sea valve tightness, sword and hoist check and system operational test in accordance with TP \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN as a result of POT&I are as follows:

SY 2

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ELECTRICAL NAVIGATION SYSTEMS	JCN INDICATED BELOW	TITLE
SWLIN	426A03A	TOTAL SHIPYARD COST	EIC GROUP	LD00

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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## 1. Dead Reckoning Systems

1.1 Mk 6 Mod 4 Dead Reckoning Tracer - Accomplish a Class "B" overhaul to include but not limited to the following:

1.1.1 Mechanically and electrically align equipment.

1.2 NC-2 Plotter - Accomplish a Class "B" overhaul to include but not limited to the following:

1.2.1 Mechanically and electrically align equipment.

1.3 Dead Reckoning Tracer - Accomplish a Class "B" overhaul to include but not limited to the following:

1.3.1 Mechanically and electrically align equipment.

2. Perform a post-repair shipboard test of the Dead Reckoning System (DRI, DRAI and NC-2 Plotter) with associated components to include an inspection, insulation resistance/continuity check and operational/calibration tests in accordance with TP \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER		SYSTEM	JCN INDICATED BELOW		TITLE				
SWLIN		TELEPHONE SYSTEMS	EIC GROUP		MAINTENANCE AND REPAIR				
			M401						
432A01A		TOTAL SHIPYARD COST							
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSGMT	PRI

1. Telephone Exchange Switchboard - Accomplish repairs to include but not limited to replacing defective wiring.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ALARM, SAFETY AND WARNING	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
436A01A			M600	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Propulsion Alarm, Safety and Warning Systems - Perform post overhaul testing of Propulsion Alarm Safety and Warning Systems in accordance with 1200 psi Propulsion Plant Test Procedure No. 436M5000013 (Propulsion Alarm, Safety and Warning System).

SY(P) FA(A)      2

2.      Radiac and Air Sampling Equipment - Calibrate equipment to ensure standards are available on completion of the overhaul.

FA      2

NOTE:      Calibration to conform with requirements set forth in NAVSHIPS 289-0153.

NOTE:      Repair of radiac and air sampling equipment beyond Forces Afloat capability will require separate action.

NOTE:      Additional repairs required to IC Circuits DW, EA, 1EC, 2EC, EF, EJ, 1EK, 1EQ, 1EW, 2EW, F, FD, 1FD, 2FD, 1TD, 2RD, 9TH and 17TD, sensors, panels, switchboards and alarms as a result of POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	INDICATING, ORDER AND METERING	JCN INDICATED BELOW	TITLE
SWLIN	437A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			M600	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		Indicating, Order and Metering Systems					
	1.1	Ckt LSB and 2SB Salinity Indicator System, Distilling Plants - Repair/replace defective indicator panels and cells.				SY	2
	1.2	Tank Level Indicator System (TK Series CKTS) - Accomplish the following repairs:				SY	2
	1.2.1	Clean and examine installations for material condition, adequate fastening and satisfactory operation.					
	1.2.2	Adjust and calibrate tank gages.					
	1.2.3	Replace or repair defective components identified as a result of the inspection. (Reservation)					
	1.3	Remote Boiler Water Level Indicators - Class "B" overhaul four (4) indicators in the fireroom firing isles to include but not limited to the following:				SY	2
	1.3.1	Repair transmitters and circuitry.					
	1.3.2	Calibrate.					



## SHIP SYSTEM WORK DESCRIPTION

**DESCRIPTION**

1.4 Propeller Revolution Indicating System - Clean two (2) system transmitters (tachometers) and two (2) transmitter indicators.

2. Perform post overhaul testing of Propulsion Order and Indicating System in accordance with 1200 psi Propulsion Plant Test Procedure No. 437M6000013 (Ships Propulsion Order and Indicating System).

NOTE: Additional repairs required to ship control and valve control circuits, level indicators, temperature indicators, control panels, electrical and mechanical order and metering systems, transmitters, sensors and counters; IC circuits 4MB, BC, KJ, ME, VS, 7VS, PX, 3TK, 2SB, PB, 1TM, 7TM, 3MB, KM, K, M, MB and TB as a result of the POT&I are as follows:

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# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	INDICATING, ORDER AND METERING	JCN INDICATED BELOW	TITLE
SWLIN	437A02A	TOTAL SHIPYARD COST	EIC GROUP LH07	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Wind Speed and Direction System, CKT HD/HE - Accomplish a Class "B" overhaul of detectors, transmitters, and synchro amplifier (MK 27 Mod 5A) to include but not limited to the following:

- 1.1 Clean, inspect and test for material condition, adequate fastening and satisfactory operation.
- 1.2 Repair or replace defective components or circuitry.

NOTE: Additional repairs required to indicators and indicator lighting circuitry as a result of the POT&I are as follows:

FA 2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	RADIO SYSTEMS	JCN INDICATED BELOW	TITLE
SWLIN	441A02A	TOTAL SHIPYARD COST	EIC GROUP	Q900

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1. Antenna Tuning Systems

- 1.1 AN/SRA-17 ( ) Antenna Group - Accomplish a Class "B" overhaul of three (3) antenna groups to include but not limited to the following:
- (Includes antenna controls, tuners, AT-924 ( ) / SR antennas, and interconnecting cables.)

SY(A) FA(P) 2

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of \_\_\_\_\_.

- 1.2 AN/SRA-33 Multicoupler - Accomplish a Class "B" overhaul of \_\_\_\_\_ multicouplers to include but not limited to the following:

SY(A) FA(P)

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of \_\_\_\_\_.



CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN 441A02*		SYSTEM	RADIO SYSTEMS						
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	

- 1.3 AN/URA-38( ) Antenna Coupler - Accomplish a Class "B" overhaul of antenna couplers to include but not limited to the following:
- (Includes coupler controls, couplers, and interconnecting cables).
- 1.3.1 Mechanically and electrically align equipment.
- 1.3.2 Test in accordance with requirements of \_\_\_\_\_.

SY (A) FA (P) 2

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	RADIO SYSTEMS	JCN INDICATED BELOW	TITLE
SWLIN	441A05A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			QBOO	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1. Communications Receivers

1.1 AN/WRR-3 ( ) Radio Receiver - Accomplish a Class "B" overhaul of three (3) radio receivers to include but not limited to the following:

SY (A) FA (P)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of \_\_\_\_\_.

1.2 R-1051( )/URR Radio Receiver - Accomplish a Class "B" overhaul of \_\_\_\_\_ radio receivers to include but not limited to the following:

SY (A) FA (P)

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	RADIO SYSTEMS	JCN INDICATED BELOW	TITLE
SWLIN	441A06A	TOTAL SHIPYARD COST	EIC GROUP QD00	MAINTENANCE AND REPAIR

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSGMT PRI

## 1. UHF/VHF Communications Systems

SY(A) FA(P) 2

1.1 AN/SRC-20( ) Radio Set - Accomplish a Class "B" overhaul of \_\_\_\_\_ radio sets to include but not limited to the following:

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of \_\_\_\_\_.

SY(A) FA(P) 2

1.2 AN/SRC-21( ) Radio Sets - Accomplish a Class "B" overhaul of \_\_\_\_\_ radio sets to include but not limited to the following:

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of \_\_\_\_\_.

SY(A) FA(P)

1.3 AN/URC-9( ) Radio Set - Accomplish a Class "B" overhaul of \_\_\_\_\_ radio sets to include but not limited to the following:

1.3.1 Mechanically and electrically align equipment.

1.3.2 Test in accordance with requirements of \_\_\_\_\_.



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

## RADIO SYSTEMS

1.4 AN/URC-32( ) Radio Set - Accomplish a Class "B" overhaul of \_\_\_\_\_ radio sets to include but not limited to the following:

1.4.1 Mechanically and electrically align equipment.

1.4.2 Test in accordance with requirements of \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	RADIO SYSTEMS	JCN INDICATED BELOW	TITLE
SWLIN	441A07A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			QE00	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Low Frequency, Medium Frequency and High Frequency Transmitters.

1.1      AN/URT-7 ( ) Radio Transmitter - Accomplish a Class "B" overhaul of one (1) transmitter to include but not limited to the following:

1.1.1      Mechanically and electrically align equipment.

1.1.2      Test in accordance with requirements of \_\_\_\_\_.

1.2      AN/WRT-2 Radio Transmitter - Accomplish a Class "B" overhaul of \_\_\_\_\_ transmitters to include but not limited to the following:

1.2.1      Mechanically and electrically align equipment.

1.2.2      Test in accordance with requirements of \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SY (A) FA (P) 2

SY (A) FA (P) 2

## SHIP SYSTEM WORK DESCRIPTION

SHIP NUMBER IN		SYSTEM	JCN INDICATED BELOW		TITLE				
			TELETYPE AND FACSIMILE		MAINTENANCE AND REPAIR				
SHIP IN		TOTAL SHIPYARD COST		EIC GROUP					
445A01A				Q300					
ACN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSGMT	PRI

## 1. Teletype Systems

1.1 AN/SGC-1A Teletype Terminal - Accomplish a Class "B" overhaul of one (1) teletype terminal to include but not limited to the following:

SY(P) FA(A) 2

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of \_\_\_\_\_.

1.1.3 Lubricate in accordance with appropriate technical manual.

1.2 AN/UCC-1D(V) Teletype Terminal - Accomplish a Class "B" overhaul of one (1) teletype terminal to include but not limited to the following:

SY(P) FA(A) 2

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of \_\_\_\_\_.

1.2.3 Lubricate in accordance with appropriate technical manual.

1.3 AN/UGC-6( ) Teletype Set - Accomplish a Class "B" overhaul of \_\_\_\_\_ teletype sets to include but not limited to the following:

SY(P) FA(A) 2

1.3.1 Mechanically and electrically align equipment.



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	TELETYPE AND FACSIMILE			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT PRI
	1.3.2	Test in accordance with requirements of _____.				
	1.3.3	Lubricate in accordance with appropriate technical manual.				
1.4	AN/UGC-16 Teletype Set - Accomplish a Class "B" overhaul of _____ teletype sets to include but not limited to the following:					SY(P) FA(A) 2
	1.4.1	Mechanically and electrically align equipment.				
	1.4.2	Test in accordance with requirements of _____.				
	1.4.3	Lubricate in accordance with technical manual.				
1.5	AN/UGC-20( ) Teletype Set - Accomplish a Class "B" overhaul of _____ teletype sets to include but not limited to the following:					SY(P) FA(A) 2
	1.5.1	Mechanically and electrically align equipment.				
	1.5.2	Test in accordance with requirements of _____.				
	1.5.3	Lubricate in accordance with technical manual.				

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	TELETYPE AND FACSIMILE				
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI
	445A01*						
	1.6	AN/UGC-25( ) Teletype Set - Accomplish a Class "B" overhaul of _____ teletype sets to include but not limited to the following:					SY(P) FA(A) 2
	1.6.1	Mechanically and electrically align equipment.					
	1.6.2	Test in accordance with requirements of _____.					
	1.6.3	Lubricate in accordance with technical manual.					
	1.7	TT-69A/UG Teletype Printer - Accomplish a Class "B" overhaul of _____ teletype printers to include but not limited to the following:					SY(P) FA(A) 2
	1.7.1	Mechanically and electrically align equipment.					
	1.7.2	Test in accordance with requirements of _____.					
	1.7.3	Lubricate in accordance with technical manual.					
	1.8	TT-70/UG( ) Teletype Printer - Accomplish a Class "B" overhaul of one (1) teletype printer to include but not limited to the following:					SY(P) FA(A) 2
	1.8.1	Mechanically and electrically align equipment.					

180

## SHIP SYSTEM WORK DESCRIPTION

PRI

COST \$

**MATL \$**

M/D

### DESCRIPTION

11

# ITE

JCN

### 1.8.2 Test in accordance with requirements of .

**1.8.3 Lubricate in accordance with technical manual.**

1.9 TT-159/UF Teletype Perforator - Accomplish a Class "B" overhaul of one (1) teletype perforator to include but not limited to the following:

#### 1.9.1.1 Mechanically and electrically align equipment.

1.9.2 Test in accordance with requirements of .

**1.9.3 Lubricate in accordance with technical manual.**

1.10 TT-176( )/UG Teletype Printer ~ Accomplish a Class "B" overhaul of teletype printers to include but not limited to the following:

### 1.10.1 Mechanically and electrically align equipment.

### 1.10.2 Test in accordance with requirements of

**1.10.3 Lubricate in accordance with technical manual.**

SY(P) FA(A) 2

SY(P) FA(A) 2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN	445A01*	SYSTEM	TELETYPE AND FACSIMILE	M/D	MATL \$	COST \$	ASSIGMT	PRI
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JCN

DESCRIPTION

1.11 TT-187( )/UG Teletype Transmitter - Accomplish a Class "B" overhaul of \_\_\_\_\_ teletype transmitters to include but not limited to the following:

1.11.1 Mechanically and electrically align equipment.

1.11.2 Test in accordance with requirements of \_\_\_\_\_.

1.11.3 Lubricate in accordance with technical manual.

1.12 TT-192( )/UG Teletype Reperforator - Accomplish a Class "B" overhaul of \_\_\_\_\_ teletype reperforators to include but not limited to the following:

1.12.1 Mechanically and electrically align equipment.

1.12.2 Test in accordance with requirements of \_\_\_\_\_.

1.12.3 Lubricate in accordance with technical manual.

SY(P) FA(A) 2

SY(P) FA(A) 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		TELETYPE AND FACSIMILE		M/D	MATL \$	COST \$	ASSGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 445A01*	1.13	TT-253( )/UG Teletype Perforator - Accomplish a Class "B" overhaul of _____ teletype perforators to include but not limited to the following:					SY(P) FA(A)	
	1.13.1	Mechanically and electrically align equipment.						
	1.13.2	Test in accordance with requirements of _____.						
	1.13.3	Lubricate in accordance with technical manual.						

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SECURITY EQUIPMENT	JCN INDICATED BELOW	TITLE
SWLIN	446A01A	TOTAL SHIPYARD COST	EIC GROUP QF00	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. COMSEC (Crypto) Equipment - Turn in COMSEC (namely, TSEC) equipment to designated refurbishment activity for repair, maintenance and installation of field changes in accordance with latest Communications Security Publication Memoranda (CSPM-1( )) (Secret).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SURVEILLANCE, SURFACE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
450A01A			P900	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1. Radar Distribution Systems

- 1.1 SB-1505/SP, SB-442/SP, or SB-1109/SB Radar Switchboard - Accomplish a Class "B" overhaul (in place) of \_\_\_\_\_ radar switchboards to include but not limited to the following:

(Includes equipment mounting.)

- 1.1.1 Mechanically and electrically align equipment.

- 1.1.2 Test in accordance with requirements of \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SURVEILLANCE (SURFACE)	JCN INDICATED BELOW	TITLE
SWLIN	450A02A	TOTAL SHIPYARD COST	EIC GROUP P000	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1. Radar Display

- 1.1 AN/SPA-4(A/B/D) Radar PPI - Accomplish a Class "B" overhaul of Radar PPIS to include but not limited to the following:

SY(P) FA(A) 2

(Includes equipment mounting).

- 1.1.1 Mechanically and electrically align equipment.

- 1.1.2 Test in accordance with requirements of \_\_\_\_\_.

NOTE: SHIPALT DDG-37-1233D replaces the AN/SPA-4( ) repeater when beyond economical repair with the AN/SPA-25( ).

- 1.2 AN/SPA-33 and 33(A) Radar PPI - Accomplish a Class "B" overhaul of \_\_\_\_\_ Radar PPIS to include but not limited to the following:

SY 2

(Includes equipment mounting).

- 1.2.1 Mechanically and electrically align equipment.

- 1.2.2 Test in accordance with requirements of \_\_\_\_\_.

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		SURVEILLANCE ( SURFACE)	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN	450A02*						
JCN	ITEM #	DESCRIPTION					

- 1.3 AN/SPA-50(A) Radar PPI - Accomplish a Class "B" overhaul of the Radar PPI to include but not limited to the following:

(Includes equipment mounting).

- 1.3.1 Mechanically and electrically align equipment.

- 1.3.2 Test in accordance with requirements of \_\_\_\_\_.

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SURFACE SEARCH RADAR	JCN INDICATED BELOW	TITLE
SWLIN	451A01A	TOTAL SHIPYARD COST	EIC GROUP P100	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

## 1. Surface Search Radar

- 1.1 AN/SPS-10(B or C) Radar Set - Accomplish a Class "B" overhaul of AN/SPS-10 (B or C) Radar set to include but not limited to the following:

(Includes radar receiver-transmitter, voltage regulator, power supply, radar modulator, interconnecting box, indicator adapter, radar set control, remote switching control and equipment mounting.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Test in accordance with requirements of \_\_\_\_\_.

- 1.2 Antenna Array and Pedestal - Accomplish Class "B" overhaul of antenna array and pedestal to include but not limited to the following:

(Includes safety switch, interconnecting cables, slotted line, waveguide, and equipment mounting.)

1.2.1 Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.

SY 2

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN		ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN		SYSTEM	SURFACE SEARCH RADAR					
451A01*								
		1.2.2	Disassemble the rotary joint; clean and replace any damaged parts.					
		1.2.3	Remove the drive motor and overhaul.					
		1.2.4	Inspect synchros; replace worn brushes and accomplish any other necessary repairs.					
		1.2.5	Reassemble antenna using approved methods to prevent bimetallic corrosion.					
		1.2.6	Paint the antenna in accordance with NSTM Chapter 9190.					
		1.2.7	Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.					
		1.3	Check all waveguides, clean oil, water and other foreign matter from guide, ensure that waveguide is satisfactory and conforms to Gen Specs 9670-1.				SY	2
		NOTE: Three different antennas in DDG-37 class. CRS Mod is scheduled to begin in FY 79.						
		2.	Upon completion of overhaul, reinstall aboard ship and conduct operational tests of surface search radar to ensure satisfactory completion of acceptance test in accordance with NSTM 9670.				SY	2

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN 451A01*	SYSTEM	SURFACE SEARCH RADAR			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$
					ASSIGMT PRI

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:

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## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AIR SEARCH RADAR	JCN INDICATED BELOW	TITLE
SWLIN	452A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			P300	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Air Search Radar

- 1.1      AN/SPS-29(C or E) Radar Set - Accomplish a Class "B" overhaul of AN/SPS-29(C or E) Radar Set to include but not limited to the following:
- (Includes antenna control, voltage regulator, power supplies, monitors, modulators, amplifiers, control sets, range indicators, dehydrators, compressors, duplexers, dummy loads, heat exchange system, filters and equipment mounting.)

SY      2

1.1.1      Mechanically and electrically align equipment.

1.1.2      Test in accordance with requirements of \_\_\_\_\_.

1.1.3      Cabinet Heat Exchanger - Clean and test.

- 1.2      AN/SPS-29(C or E) Antenna Array - Replace AN/SPS-29(C or E) antenna with restored antenna or, if restored antenna is not available, accomplish Class "B" overhaul of AN/SPS-29(C or E) antenna to include but not limited to the following:

SY      2

(Includes antenna switches, equipment mounting, and transmission line, or waveguide.)

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	ITEM #						
452A01*		AIR SEARCH RADAR					
JCN							
	1.2.1	Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.					
	1.2.2	Disassemble the rotary joint; clean and replace any damaged parts.					
	1.2.3	Remove the drive motor and overhaul.					
	1.2.4	Inspect synchros; replace worn brushes and accomplish any other necessary repairs.					
	1.2.5	Reassemble antenna using approved methods to prevent bimetallic corrosion.					
	1.2.6	Paint the antenna in accordance with NSTM, Chapter 9190.					
	1.2.7	Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.					
	1.3	Check all transmission lines, or waveguides, clean oil, water and other foreign matter from guide, ensure that transmission line is satisfactory and conforms to GEN SPECS 9670-1.				SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN	452A01*	SYSTEM	AIR SEARCH RADAR
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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2. Conduct shipboard operational tests of AN/SPS-29(C or E) radar and antenna to ensure satisfactory completion of acceptance test in accordance with NSTM 9670.

SY 2

NOTE: SHIPALT DDG-37-1009K replaces the AN/SPS-29 with the AN/SPS-49 radar.

NOTE: AN/SPS-29(C or E) cooling system (closed loop) equipment repairs required as a result of POT&I covered in SWLIN 532A01\*.

NOTE: AN/SPS-29(C or E) electronic dry air system repairs required as a result of POT&I covered in SWLIN 551A06\*.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	AIR SEARCH RADAR (3D)	EIC GROUP	MAINTENANCE AND REPAIR
453A01A	TOTAL SHIPYARD COST	P400	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

SY      2

1. AN/SPS-48( ) (V) Radar Set - Accomplish a Class "B" overhaul of AN SPS-48( ) (V) Radar Set to include but not limited to the following:

(Includes antenna control, voltage regulator, power supplies, monitors, modulators, amplifiers, control sets, range indicators, dehydrators, compressors, duplexers, dummy loads, heat exchange system, filters and equipment mounting.)

1.1 Mechanically and electrically align equipment.

1.2 Test in accordance with requirements of \_\_\_\_\_.

1.3 Cabinet Heat Exchanger - Clean and test.

2. AN/SPS-48( ) (V) Antenna Array - Replace AN/SPS-48( ) (V) antenna with restored antenna or, if restored antenna is not available, accomplish Class "B" overhaul of AN/SPS-48( ) (V) antenna to include but not limited to the following:

(Includes antenna switches, equipment mounting, and transmission line, or waveguide.)

- 2.1 Disassemble the pedestal; examine gears, bearings and oil seals. Replace the parts that evidence excessive wear or other damage.

SY      2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	AIR SEARCH RADAR (3D)					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI	
	453A01*							
	2.2	Disassemble the rotary joint; clean and replace any damaged parts.						
	2.3	Remove the drive motor and overhaul.						
	2.4	Inspect synchros; replace worn brushes and accomplish any other necessary repairs.						
	2.5	Reassemble antenna using approved methods to prevent bimetallic corrosion.						
	2.6	Paint the antenna in accordance with NSTM, Chapter 9190.						
	2.7	Conduct operational tests in shop to ensure satisfactory rotation, drive gear performance and ship's heading marker operation.						
	3.	Check all transmission lines, or waveguides, clean oil, water and other foreign matter from guide, ensure that transmission line is satisfactory and conforms to GEN SPECS 9670-1.				SY	2	
	4.	Conduct shipboard operational tests of AN/SPS-48( ) (V) radar and antenna to ensure satisfactory completion of acceptance test in accordance with NSTM 9670.				SY	2	

NOTE: AN/SPS-48( ) (V) cooling system (closed loop) equipment repairs required as a result of POT&I covered in SWLIN 532A01\*.

## SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET									
SWLIN	SYSTEM								
453A01 *	AIR SEARCH RADAR (3D)								
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI		

NOTE: AN/SPS-48( ) (V) electronic dry air system repairs required as a result of POT&I covered in SWLIN 551A06\*.

**NOTE:** Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	IDENTIFICATION (IFF)	JCN INDICATED BELOW	TITLE
SWLIN	455A01A	TOTAL SHIPYARD COST	EIC GROUP P600	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      IFF Display

1.1      AN/UPA-59(V) - Decoder Group - Accomplish a Class "B" overhaul to sixteen (16) decoder groups to include but not limited to the following:

1.1.1      Mechanically and electrically align equipment.

1.1.2      Test in accordance with requirements of \_\_\_\_\_.

NOTE: Applies after SHIPALT DDG-37-1035K is accomplished.

NOTE: Additional repairs required in this SWLIN (including field changes to the above equipment) as a result of the POT&I are as follows:

SY      2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ACTIVE SONAR	JCN INDICATED BELOW	TITLE
SWLIN	461A01A	TOTAL SHIPYARD COST	EIC GROUP RL3H	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL\$      COST \$      ASSIGMT      PRI

1.      AN/SQS-23D Sonar System

1.1      Accomplish a Class "B" overhaul of all components to include but not limited to the following:

1.1.1      Mechanically and electrically align equipment.

1.1.2      Test in accordance with requirements of \_\_\_\_\_.

1.1.3      Test cabinet blowers, replace defective blowers.

1.1.4      Cabinet Heat Exchangers - Acid wash and neutralize, pressure test and certify.

NOTE: Does not apply if SHIPALT DDG-37-1037 or DDG-37-1123 are accomplished.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SY      2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ACTIVE/PASSIVE (MULTIPLE MODE) SONAR	JCN INDICATED BELOW	TITLE
SWLIN	463A01A	TOTAL SHIPYARD COST	EIC GROUP R13R	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL\$      COST \$      ASSIGMT      PRI

1.      AN/SQQ-23 Sonar System

1.1      Accomplish a Class "B" overhaul of all components to include but not limited to the following:

1.1.1      Mechanically and electrically align equipment.

1.1.2      Test in accordance with requirements of \_\_\_\_\_.

1.1.3      Test cabinet blowers replace defective blowers.

1.1.4      Cabinet Heat Exchangers - Acid wash and neutralize, pressure test and certify.

NOTE:      Applies after SHIPALT DDG-37-1037, 1122 or 1123 are accomplished

NOTE:      Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

SY      2



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ACTIVE ECM	JCN INDICATED BELOW	TITLE
SWLIN	471A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			NCOO	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGNMT      PRI

## 1. Active ECM, Radar

- 1.1 AN/SLA-12( ) or AN/SLA-15( ) Antenna Group - Accomplish a Class "B" overhaul to include but not limited to the following:

(Includes antenna coupler, waveguide, heaters, mounting hardware and dome.)

1.1.1 Mechanically and electrically align equipment.

1.1.2 Measure waveguide insertion loss and VSWR.

1.1.3 Test in accordance with requirements of \_\_\_\_\_.

- 1.2 AN/ULQ-6( ) Countermeasure Set - Accomplish a Class "B" overhaul of two (2) countermeasure sets to include but not limited to the following:

1.2.1 Mechanically and electrically align equipment.

1.2.2 Test in accordance with requirements of \_\_\_\_\_.

NOTE: SHIPALT DDG-37-1228K makes major modification to the ECM configuration.

SY(A) FA(P) 2

SY 2

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 471A01 *		ACTIVE ECM						

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PASSIVE ECM	EIC GROUP	MAINTENANCE AND REPAIR
472A01A	TOTAL SHIPYARD COST	N800	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

1.      Passive ECM System

- 1.1      AN/SLR-12( )/Countermeasures Receiving Set -  
Accomplish a Class "B" overhaul to include but  
not limited to the following:

(Includes control set-amplifier, antenna and  
mounting hardware.)

- 1.1.1      Mechanically and electrically align  
equipment.

- 1.1.2      Test in accordance with requirements  
of \_\_\_\_\_.

- 1.2      AN/SLA-10( ) Video Blanker - Accomplish a  
Class "B" overhaul to include but not limited  
to the following:

- 1.2.1      Mechanically and electrically align  
equipment.

- 1.2.2      Test in accordance with requirements  
of \_\_\_\_\_.

- 1.3      MX-6632/SLA-10 Video Mixer Blanker - Accomplish  
a Class "B" overhaul to include but not limited  
to the following:

- 1.3.1      Mechanically and electrically align  
equipment.

- 1.3.2      Test in accordance with requirements  
of \_\_\_\_\_.

SY      2

SY (A) FA (P)      2

SY (A) FA (P)      2



# SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

1.4 AN/WLR-1( ) Countermeasures Receiving Set,  
One (1) per ship - Accomplish a Class "B"  
overhaul to include but not limited to the  
following:

(Includes freq. converters, tuners, cabinets,  
control storer, azimuth indicator, pulse  
analyzer, power supplies, switching units,  
pulse generator, test set, interconnection  
box and cabling, and mounting hardware.)

1.4.1 Mechanically and electrically align  
equipment.

1.4.2 Test in accordance with requirements  
of \_\_\_\_\_.

1.5 AS-571( )/SLR Antenna - Class "B" overhaul  
antenna to include but not limited to the  
following:

1.5.1 Mechanically and electrically align  
equipment.

1.5.2 Test in accordance with requirements  
of \_\_\_\_\_.

1.6 AS-616/SLR Antenna - Class "B" overhaul  
antenna to include but not limited to:

1.6.1 Mechanically and electrically align  
equipment.

1.6.2 Test in accordance with requirements  
of \_\_\_\_\_.

SY(A) FA(P) 2

SY(A) FA(P) 2

SY(A) FA(P)

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	472A01*	PASSIVE ECM						
	1.7	AS-899B/SLR Antenna - Class "B" overhaul antenna to include but not limited to the following:					SY(A) FA(P)	2
	1.7.1	Mechanically and electrically align equipment.						
	1.7.2	Test in accordance with requirements of _____.						
	NOTE: Not applicable if being replaced by AS-899(F).							
	1.8	C-3118( )/WLR Control Indicator - Accomplish a Class "B" overhaul of one (1) indicator to include but not limited to: (Includes mounting hardware.)					SY(A) FA(P)	2
	1.8.1	Mechanically and electrically align equipment.						
	1.8.2	Test in accordance with requirements of _____.						
	1.9	AM-1017( )/SLR Magnetic Control Amplifier - Accomplish a Class "B" overhaul of one (1) magnetic control amplifier to include but not limited to the following:						
	1.9.1	Mechanically and electrically align equipment.						
	1.9.2	Test in accordance with requirements of _____.					SY(A) FA(P)	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	PASSIVE ECM					
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	472A01*							
	1.10	CAW-66131	Omni Antenna - Clean and paint two (2) Omni Antennas.				SY(A) FA(P)	2
	1.11	CAW-66132	Omni Antenna - Replace two (2) Omni Antennas.				SY(A) FA(P)	2
	1.12	ECM Waveguide	- Accomplish the following repairs to two (2) sets of waveguides:				SY(A) FA(P)	
	1.12.1		Remove, clean and paint.					
	1.12.2		Reinstall and conduct insertion loss and VSWR tests.					

NOTE: SHIPALT DDG-37-1228K makes major modifications to the ECM configuration.

NOTE: Additional repairs required in this SWLIN (including field changes to above equipment) as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DEGAUSSING	JCN INDICATED BELOW	TITLE
SWLIN	475A01A	TOTAL SHIPYARD COST	EIC GROUP N400	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      SY      PRI      2

1.      Degaussing System Static Power Supplies - Accomplish a Class "B" overhaul (in place) of two (2) power supplies to include but not limited to the following:

1.1      Megger all circuits and remove grounds, opens and shorts.

1.2      Clean and align switches and contactors.

1.3      Calibrate meters.

1.4      Conduct linearity test.

2.      "A" Coil Amplidyne - Accomplish a Class "B" overhaul to the "A" coil amplidyne.

SY      2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	GUN FIRE CONTROL	EIC GROUP	MAINTENANCE AND REPAIR
481A01A	TOTAL SHIPYARD COST	GI00	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      MK 68 Gun Fire Control System

1.1      AN/SPG-53(A) Radar - Accomplish a Class "B" overhaul to include but not limited to the following:

1.1.1      Clean and test component parts and circuitry to determine any that are not within tolerances.

1.1.2      Install new parts and components for any not within tolerance and that show excessive wear.

1.1.3      Mechanically and electrically align equipment.

1.1.4      Replace radar antenna reflector and scanner assembly with restored RFI unit or accomplish a Class "B" overhaul.

1.1.5      Clean and inspect all waveguide and conduct VSWR test.

1.1.6      Test in accordance with requirements of \_\_\_\_\_.

1.2      MK 68 Gun Director - Accomplish repairs to include but not limited to the following:

1.2.1      Range Finder (MK 41 or MK 75) - Accomplish a Class "B" overhaul.

SY      2

SY      2





**CONTINUATION SHEET**

SWLIN	SYSTEM						
481A01*		GUN FIRE CONTROL					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI

(Includes MK 156 MOD 1 Control Panel.)

- 1.5.1 Test in accordance with requirements of \_\_\_\_\_.
- 1.6 MK 116 Star Shell Computer - Accomplish a Class "B" overhaul to include but not limited to the following:
- 1.6.1 Test in accordance with requirements of \_\_\_\_\_.

**NOTE:** Additional repairs required in this SWLIN as a result of the POTSI are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	GUN FIRE CONTROL	EIC GROUP	MAINTENANCE AND REPAIR
481A03A	TOTAL SHIPYARD COST	G000	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Conduct dummy director and error recorder checks in accordance with \_\_\_\_\_. Provide ship with new error recorder tapes.

FA      2

2. MK-2 Dynamic Tester - Accomplish a class "B" overhaul.

SY      2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIRE CONTROL (NON-SONAR DATA BASE)	JCN INDICATED BELOW	TITLE
SWLIN	482A01A	TOTAL SHIPYARD COST	EIC GROUP 5C00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSIGMT	PRI
	1.	MK 152 Digital Computer - Accomplish a Class "B" overhaul of one (1) digital computer to include but not limited to the following:				SY	2

1.1 Test in accordance with requirements of \_\_\_\_\_.

2. AN/SPG 55B Radar - Accomplish a Class "B" overhaul to include but not limited to:

(Includes Directors and Drives.)

2.1 Clean and test component parts and circuitry to determine any that are not within tolerances.

2.2 Install new parts and components for any not within tolerance and that show excessive wear.

2.3 Mechanically and electrically align equipment.

2.4 Replace radar antenna reflector and scanner assembly with restored RFI unit or accomplish a Class "B" overhaul.

2.5 Clean and inspect all waveguide and conduct VSWR test.

2.6 Test in accordance with requirements of \_\_\_\_\_.

SY 2



CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	482A01*	SYSTEM FIRE CONTROL (NON-SONAR DATA BASE)					

NOTE: SHIPALT DDG-37-1093 requires TYCOM funding of repairs during conversion to GMFCS MK 76 MOD 8.

3. MK 19 Digital Data Recorder - Accomplish a Class "B" overhaul. SY 2
4. MK 75 Signal Data Converter - Accomplish a Class "B" overhaul. SY 2
5. MK 9 MOD 0 Motor Generator Set (3KW) - Accomplish a Class "B" overhaul to include but not limited to: SY 2

(Includes voltage/frequency regulator and controller.)

- 5.1 Slip Rings - Clean and polish.
- 5.2 Brush Rigging and Brushes - Clean and adjust rigging, and replace brushes.
- 5.3 Journal Bearings - Inspect and replace as necessary.

NOTE: Items 1, 3, 4, and 5 applicable after SHIPALT DDG-37-1014K is accomplished.

NOTE: Additional repairs required in this SWLIN as a result of POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIRE CONTROL SYSTEM (NON-SONAR DATA BASE)	JCN INDICATED BELOW	TITLE
SWLIN	482A02A	TOTAL SHIPYARD COST	EIC GROUP 5FAM	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	AN/SPM-9 Radar Test Set - Accomplish a Class "B" overhaul.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIRE CONTROL SYSTEM (SONAR DATA BASE)	JCN INDICATED BELOW	TITLE
SWLIN	483A01A	TOTAL SHIPYARD COST	EIC GROUP JP00	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL\$      COSY\$      ASSIGMT      PRI

1.      MK 111 ASROC Fire Control System

1.1      MK 38 MOD 0 Attack Console - Accomplish a Class "B" overhaul to include but not limited to the following:

1.1.1      Align all gear trains, zero all synchros and resolvers.

1.1.2      Test in accordance with requirements of \_\_\_\_\_.

1.2      MK 43 MOD 0 Relay Transmitter - Accomplish a Class "B" overhaul.

NOTE: Additional repairs required in this SWLIN a result of the POT&I are as follows:

SY      2

FA      2



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ELECTRONIC TEST, CHECKOUT, AND MONITORING EQUIPMENT	JCN INDICATED BELOW	TITLE
SWLIN	491A01A	TOTAL SHIPYARD COST	EIC GROUP W000	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. General Purpose Test Equipment - Accomplish the following:

- 1.1 Transport to a certified calibration facility all portable test equipment to ensure that adequate standards are available upon completion of the overhaul to sustain the performance standards throughout the overhaul cycle. Calibration facility shall calibrate all portable test equipment prior to performance standards measurements in accordance with NSTM 9670 at no cost to the Type Commander in accordance with NAVORDINST 4855.14 and NAVSEASYSKOMINST 9690.12A. (Includes all general purpose electrical and electronic measuring devices which are not a part of a system. NAVELEX (SPETERL) is the primary source listing of equipment for inclusion in this category and all general purpose electronic test equipment (GPETE).)

FA 2

NOTE: Repair of test equipment is a user responsibility in accordance with NSTM 9670. Equipment in need of major repairs will require funding by TYCOM.

PART 3.5

MAJOR SHIP SYSTEM 5

MAJOR SHIP SYSTEM 5 - AUXILIARY SYSTEMS

504	INSTRUMENTS AND INSTRUMENT BOARDS
508	THERMAL INSULATION FOR PIPING AND MACHINERY
513	MACHINERY SPACE VENTILATION
514	AIR CONDITIONING SYSTEM
516	REFRIGERATION SYSTEM
520	SEA WATER SYSTEMS
521	FIREMAIN AND FLUSHING (SEA WATER) SYSTEM
523	WASHDOWN SYSTEM
524	AUXILIARY SEA WATER SYSTEM
526	SCUPPERS AND DECK DRAINS
528	PLUMBING DRAINAGE
529	DRAINAGE AND BALLASTING SYSTEM
531	DISTILLING PLANT
533	POTABLE WATER
534	AUXILIARY STEAM AND DRAINS WITHIN MACHINERY BOX
536	AUXILIARY FRESH WATER COOLING SYSTEMS
541	SHIP FUEL AND FUEL COMPENSATING SYSTEM
551	COMPRESSED AIR SYSTEMS
555	FIRE EXTINGUISHING SYSTEMS



MAJOR SHIP SYSTEM 5 - AUXILIARY SYSTEMS (CON'T)

561	STEERING CONTROL SYSTEMS
562	RUDDER
571	REPLENISHMENT-AT-SEA
581	ANCHOR HANDLING AND STOWAGE SYSTEMS
583	BOAT HANDLING AND STOWAGE SYSTEMS
593	ENVIRONMENTAL POLLUTION CONTROL

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	INSTRUMENTS & INSTRUMENT BOARDS	JCN INDICATED BELOW	TITLE
SWLIN	504A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Instrumentation - Accomplish the following repairs:

1.1 Calibrate and repair propulsion plant gages (ship to shop). Instruments covered in this SWLIN do not include those instruments assigned shipyard in various system maintenance and repair SWLINS.

FA 2

1.1.1 Compound gages

1.1.2 Vacuum gages

1.1.3 600 psi and above gages

1.2 Calibrate and repair Propulsion Plant gages below 600 psi not assigned shipyard in System Maintenance and Repair SWLINS.

FA 2

1.3 Replace rejected gages which fail to calibrate in Items 1.1 and 1.2 and known defective, broken or missing gages.

FA 2

NOTE: This SWLIN includes all pressure gages and thermometers in all ship systems. Ship's Force should ensure (by careful review of the SARP), that instruments not specifically assigned Shipyard in various Maintenance and Repair SWLINS are calibrated and within specs for PEB/LOE and subsequent dock and sea trials in accordance with Items 1.1 through 1.3 of this SWLIN.

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN	SYSTEM	INSTRUMENTS & INSTRUMENT BOARDS			
504A01*					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$

NOTE: Item 1.1 will be assigned SY for Naval Shipyard overhauls and TYCOM funds reserved. (Ship's Force will deliver and pick up.)

NOTE: Item 1.1 will be assigned FA total responsibility for private shipyard overhauls.

240



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	THERMAL INSULATION FOR PIPING & MACHINERY	JCN INDICATED BELOW	TITLE
SWLIN	508A01A	TOTAL SHIPYARD COST	EIC GROUP T10B	MAINTENANCE & REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Test machinery space insulation in accordance with 1200 psi Propulsion Plant Test Procedure No. 200U5040015 (Machinery Space Insulation and Plant Tightness Inspection at Sea).

FA #      2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	MACHINERY SPACE VENTILATION	EIC GROUP	MAINTENANCE AND REPAIR
513A01A	TOTAL SHIPYARD COST		

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Perform overhaul testing of Machinery Space Ventilation System in accordance with 1200 psi Steam Propulsion Plant Test Procedure No. 513T3000013 (Fireroom Ventilation System).

NOTE: SHIPALT DDG-37-1221D modifies fireroom ventilation.

NOTE: Additional repairs required to Machinery Space Ventilation Systems as a result of POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AIR CONDITIONING	JCN INDICATED BELOW	TITLE
SWLIN	514A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			T404	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Air Conditioning Plant No. 1 - Accomplish the following repairs:

1.1      Compressor, Chiller, Receiver, and Condenser - Class "B" overhaul.      SY      2

1.1.1      Replace five (5) resilient mounts.

1.1.2      Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses, two (2) 90 degree assemblies.

1.2      Compressor Motor and Chilled Water Pump Motor - Class "B" overhaul.      SY      2

1.3      Chilled Water Pump - Class "B" overhaul.      SY      2

1.3.1      Replace four (4) resilient mounts.

1.3.2      Replace suction and discharge flexible hoses, two (2) 90 degree assemblies.

1.4      Compressor and Chilled Water Pump Motor Controllers and Safety Switches - Accomplish a Class "B" overhaul to include but not limited to the following:      SY      2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 514A01*			AIR CONDITIONING					
	1.4.1		Clean and preserve controller enclosure.					
	1.4.2		Clean and tighten terminals and connectors; align contactors.					
	1.4.3		Replace defective or deteriorated wiring and components within the controller enclosure.					
	1.5		Calibrate gages.				FA	2
	1.6		Flush, recharge, and perform post overhaul operational test of Air Conditioning Plant No. 1 for a period of forty-eight (48) hours; adjust controls and regulating devices.				SY	2
	2.		Air Conditioning Plant No. 2 - Accomplish the following repairs:					
	2.1		Compressor, Chiller, Receiver, and Condenser - Class "B" overhaul.				SY	2
	2.1.1		Replace five (5) resilient mounts.					
	2.1.2		Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses, two (2) 90 degree assemblies.					
	2.2		Compressor Motor and Chilled Water Pump Motor - Class "B" overhaul.				SY	2
	2.3		Chilled Water Pump - Class "B" overhaul.				SY	2
	2.3.1		Replace four (4) resilient mounts.					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	ITEM #						
514A01*		AIR CONDITIONING					
	2.3.2	Replace suction and discharge flexible hoses, two (2) 90 degree assemblies.					
	2.4	Compressor and Chilled Water Pump Motor Controllers and Safety Switches - Accomplish Class "B" overhaul to include but not limited to the following:				SY	2
	2.4.1	Clean and preserve controller enclosure.					
	2.4.2	Clean and tighten terminals and connectors; align contactors.					
	2.4.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	2.5	Calibrate gages.				FA	2
	2.6	Flush, recharge, and perform post overhaul operational test of Air Conditioning Plant No. 2 for a period of forty-eight (48) hours; adjust controls and regulating devices.				SY	2
	3.	Air Conditioning Plant No. 3 - Accomplish the following repairs:					
	3.1	Compressor, Chiller, Receiver, and Condenser - Class "B" overhaul.					
	3.1.1	Replace five (5) resilient mounts.					
	3.1.2	Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses, two (2) 90 degree assemblies.				SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		AIR CONDITIONING					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 514A01*	3.2	Compressor Motor and Chilled Water Pump Motor - Class "B" overhaul.				SY	2
	3.3	Chilled Water Pump - Class "B" overhaul.				SY	2
	3.3.1	Replace four (4) resilient mounts.					
	3.3.2	Replace suction and discharge flexible hoses, two (2) 90 degree assemblies.					
	3.4	Compressor and Chilled Water Pump Motor Controllers and Safety Switches - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	3.4.1	Clean and preserve controller enclosure.					
	3.4.2	Clean and tighten terminals and connectors; align contactors.					
	3.4.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	3.5	Calibrate gages.				FA	2
	3.6	Flush, recharge, and perform post overhaul operational test of Air Conditioning Plant No. 3 for a period of forty-eight (48) hours; adjust controls and regulating devices.				SY	2
	4.	Air Conditioning Plant No. 4 - Accomplish the following repairs:					
	4.1	Compressor, Chiller, Receiver, and Condenser - Class "B" overhaul.				SY	2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	AIR CONDITIONING					
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSGMT	PRI
	4.1.1	Replace five (5) resilient mounts.						
	4.1.2	Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses, two (2) 90 degree assemblies.						
4.2		Compressor Motor and Chilled Water Pump Motor - Class "B" overhaul.					SY	2
4.3		Chilled Water Pump - Class "B" overhaul.					SY	2
	4.3.1	Replace four (4) resilient mounts.						
	4.3.2	Replace suction and discharge flexible hoses, two (2) 90 degree assemblies.						
4.4		Compressor and Chilled Water Pump Motor Controllers and Safety Switches - Accomplish a Class "B" overhaul to include but not limited to the following:					SY	2
	4.4.1	Clean and preserve controller enclosure.						
	4.4.2	Clean and tighten terminals and connectors; align contactors.						
	4.4.3	Replace defective or deteriorated wiring and components within the controller enclosure.						
4.5		Calibrate gages.					FA	2
4.6		Flush, recharge, and perform post overhaul operational test of Air Conditioning Plant No. 4 for a period of forty-eight (48) hours; adjust controls and regulating devices.					SY	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #						
SWLIN 514A01*		AIR CONDITIONING					
	5.	Air Conditioning Plant No. 5 - Accomplish the following repairs:					
	5.1	Compressor, Chiller, Receiver, and Condenser - Class "B" overhaul.				SY	2
	5.1.1	Replace five (5) resilient mounts.					
	5.1.2	Replace flexible compressor refrigerant discharge and suction lines with Anaconda metal hoses, two (2) 90 degree assemblies.					
	5.2	Compressor Motor and Chilled Water Pump Motor - Class "B" overhaul.				SY	2
	5.3	Chilled Water Pump - Class "B" overhaul.				SY	2
	5.3.1	Replace four (4) resilient mounts.					
	5.3.2	Replace suction and discharge flexible hoses, two (2) 90 degree assemblies.					
	5.4	Compressor and Chilled Water Pump Motor Controllers and Safety Switches - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	5.4.1	Clean and preserve controller enclosure.					
	5.4.2	Clean and tighten terminals and connectors; align contactors.					
	5.4.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	5.5	Calibrate gages.				FA	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #							
SWLIN		AIR CONDITIONING						
514A01 *								

5.6 Flush, recharge, and perform post overhaul operational test of Air Conditioning Plant No. 5 for a period of forty-eight (48) hours; adjust controls and regulating devices.

NOTE: ShipAlt DDG-37-1124K replaces existing air conditioning plants.

NOTE: Repairs to sea water and chilled water piping and valves as a result of POT&I are covered in SWLIN 514A02\*.

NOTE: Repairs to cooling coils and thermostatic flow valves as a result of POT&I are covered in SWLIN 514A03\*.

NOTE: Additional repairs required in this SWLIN as a result of POT&I are as follows:

SY 2



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AIR CONDITIONING	JCN INDICATED BELOW	TITLE
SWLIN	514A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
						SY	2

1. Air Conditioning Salt Water Circulating Pump and Motor - Accomplish a Class "B" overhaul to five (5) air conditioning salt water circulating pumps and motors to include but not limited to:

1.1 Shaft Bushings and Wearing Rings - Renew.

1.2 Bearings - Inspect and replace as necessary.

1.3 Align pump and motor.

2. Salt Water and Cooling Water Piping and Valves - Accomplish the following repairs:

2.1 Repair/replace defective insulation on piping.

2.2 Class "B" overhaul the following valves:

2.2.1 King Valves.

2.2.2 Butterfly valves (18).

2.2.3 3" Regulating valves.

2.2.4 5" CLA valves (2).

2.2.5 3" GLDG globe valves.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	REFRIGERATION	JCN INDICATED BELOW	TITLE
SWLIN	516A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			T503	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Refrigeration Plant No. 1 - Accomplish the following repairs:

1.1 Compressor and Condenser - Class "B" overhaul (includes coupling). SY 2

1.1.1 Replace 90 degree compressor suction and discharge (one (1) each) braided metal connections.

1.2 Compressor Motor - Class "B" overhaul. SY 2

1.3 Controller - Accomplish a Class "B" overhaul to include but not limited to the following: SY 2

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

1.4 Calibrate gages, thermometers and indicators. SY 2

1.5 Class "B" overhaul valves and switches. SY 2

1.6 Repair/replace deteriorated piping insulation SY 2

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN	SYSTEM	REFRIGERATION					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	516A01*						
	1.7	Pressurize, test and repair refrigerant piping/tubing and valves.				SY	2
	1.8	Clean Freon System with an approved tank type cleaner.				SY	2
	1.9	Perform twenty-four (24) hour operational test, adjust control switches and test safety devices.				SY	2
	2.	Refrigeration Plant No. 2 - Accomplish the following repairs:					
	2.1	Compressor and Condenser - Class "B" overhaul (includes coupling).				SY	2
	2.1.1	Replace 90 degree compressor suction and discharge (one (1) each) braided metal connections.					
	2.2	Compressor Motor - Class "B" overhaul.				SY	2
	2.3	Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	2.3.1	Clean and preserve controller enclosure.					
	2.3.2	Clean and tighten terminals and connectors. Align contactors.					
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		REFRIGERATION					
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
SWLIN 516A01*	2.4	Calibrate gages, thermometers and indicators.				SY	2
	2.5	Class "B" overhaul valves and switches.				SY	2
	2.6	Repair/replace deteriorated piping insulation.				SY	2
	2.7	Pressurize, test and repair refrigerant piping/tubing and valves.				SY	2
	2.8	Clean Freon System with an approved tank type cleaner.				SY	2
	2.9	Perform twenty-four (24) hour operational test, adjust control switches and test safety devices.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SEA WATER TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Sea Valves					
	1.1	Accomplish a Class "B" overhaul of all sea valves large than 4 1/2 inch.				SY	2
	1.2	Accomplish a Class "B" overhaul of all sea valves 4 1/2 inch and smaller.				SY(P) FA(A)	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
521A03A			T801	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Fire Pump No. 1 (MD) - Accomplish the following repairs:

1.1 Pump, Flexible Coupling and Motor Support Bracket - Overhaul in accordance with TRS 0521-086-\_\_\_\_\_.

SY 2

1.1.1 Replace four (4) resilient mounts (not in TRS).

1.1.2 Replace suction and discharge flexible connector (not in TRS).

1.1.3 Suction and Discharge Gages - Repair and calibrate.

1.2 Motor - Overhaul in accordance with TRS 0521-086-\_\_\_\_\_.

SY 2

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

SY(P) FA(A) 2

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 521A03*		SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)							
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT	PRI	
	2.	Fire Pump No. 2 (MD) - Accomplish the following repairs:								
	2.1	Pump, Flexible Coupling and Motor Support Bracket - Overhaul in accordance with TRS 0521-086-____.						SY	2	
	2.1.1	Replace four (4) resilient mounts (not in TRS).								
	2.1.2	Replace suction and discharge flexible connectors (not in TRS).								
	2.1.3	Suction and Discharge Gages - Repair and calibrate.								
	2.2	Motor - Overhaul in accordance with TRS 0521-086-____.						SY	2	
	2.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:						SY(P) FA (A)	2	
	2.3.1	Clean and preserve controller enclosure.								
	2.3.2	Clean and tighten terminals and connectors. Align contactors.								
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.								

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)					
JCN	ITEM #	DESCRIPTION		M/D	MATL \$	COST \$	ASSIGMT	PRI
	3.	Fire Pump No. 3 (TD) - Accomplish the following repairs:						
	3.1	Pump and Flexible Coupling - Overhaul in accordance with TRS 0521-086-____.					SY	2
	3.1.1	Replace suction and discharge flexible connectors (not in TRS).						
	3.1.2	Suction and Discharge Gages - Repair and calibrate.						
	3.2	Turbine - Overhaul in accordance with TRS 0521-086-____.					SY	2
	4.	Fire Pump No. 4 (MD) - Accomplish the following repairs:						
	4.1	Pump, Flexible Coupling and Motor Support Bracket - Overhaul in accordance with TRS 0521-086-____.					SY	2
	4.1.1	Replace four (4) resilient mounts (not in TRS).						
	4.1.2	Replace suction and discharge flexible connectors (not in TRS).						
	4.1.3	Suction and Discharge Gages - Repair and calibrate.						
	4.2	Motor - Overhaul in accordance with TRS 0521-086-____.					SY	2
	4.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:					SY(P) FA(A)	2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	ITEM #						
521A03*		FIREMAIN AND FLUSHING (SEA WATER)					
JCN							
	4.3.1	Clean and preserve controller enclosure.					
	4.3.2	Clean and tighten terminals and connectors. Align contactors.					
	4.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	5.	Fire Pump No. 5 (MD) - Accomplish the following repairs:					
	5.1	Pump, Flexible Coupling and Motor Support Bracket - Overhaul in accordance with TRS 0521-086-____.				SY	2
	5.1.1.	Replace four (4) resilient mounts (not in TRS).					
	5.1.2	Replace suction and discharge flexible connector (not in TRS).					
	5.1.3	Suction and Discharge Gages - Repair and calibrate.					
	5.2	Motor - Overhaul in accordance with TRS 0521-086-____.				SY	2
	5.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY(P) FA(A)	2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 521A03*		SYSTEM	FIREMAIN AND FLUSHING (SEA WATER)						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		
	5.3.1	Clean and preserve controller enclosure.							
	5.3.2	Clean and tighten terminals and connectors. Align contactors.							
	5.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.							
6.	Fire Pump No. 6 (TD)	- Accomplish the following repairs:							
	6.1	Pump and Flexible Coupling - Overhaul in accordance with TRS 0521-086-_____.				SY	2		
	6.1.1	Replace suction and discharge flexible connectors (not in TRS).				SY	2		
	6.1.2	Suction and Discharge Gages - Repair and calibrate.							
	6.2	Turbine - Overhaul in accordance with TRS 0521-086-_____.				SY	2		
7.	Perform post overhaul testing of No. 1,2,3,4,5, and 6 Fire Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 521T8000022 (Fire Pumps).								

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	WASHDOWN SYSTEM	EIC GROUP	MAINTENANCE AND REPAIR
523A01A	TOTAL SHIPYARD COST	T805	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Repair/replace damaged/missing water washdown system nozzles.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

FA 2

240

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	AUXILIARY SEA WATER SYSTEM	EIC GROUP	MAINTENANCE AND REPAIR
524A02A	TOTAL SHIPYARD COST	T806	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Auxiliary Machinery Cooling Water Pumps and Motor -  
Overhaul two (2) cooling water pumps and motors in  
accordance with TRS 536-086-\_\_\_.

SY      2

2.      Auxiliary Machinery Cooling Water Controller -  
Accomplish a Class "B" overhaul to two (2)  
controllers to include but not limited to the  
following:

SY(P) FA(A)      2

2.1 Clean and preserve controller enclosure.

2.2 Clean and tighten terminals and connectors.  
Align contactors.

2.3 Replace defective or deteriorated wiring  
and components within the controller enclosure.

3.      Perform post overhaul testing of two (2) Auxiliary  
Machinery Cooling Pumps in accordance with 1200 psi  
Propulsion Plant Test Procedure No. 524FB000022  
(Auxiliary Machinery Cooling Water Pump).

SY      2

NOTE: Additional repairs required in this SWLIN as a  
result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	SCUPPERS AND DECK DRAINS	JCN INDICATED BELOW	TITLE
SWLIN	526A01A	TOTAL SHIPYARD COST	EIC GROUP TC00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Replace approximately fifteen (15) damaged/missing main deck scuppers.				FA	3

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PLUMBING DRAINAGE	EIC GROUP	MAINTENANCE AND REPAIRS
528A01A	TOTAL SHIPYARD COST	T706	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Repair/replace the following fixtures in the crew's sanitary spaces as determined as a result of the POT&I:

- 1.1 Flushometers.
- 1.2 Traps.
- 1.3 Urinals.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DRAINAGE AND BALLASTING	EIC GROUP	MAINTENANCE AND REPAIR
529A01A	TOTAL SHIPYARD COST	TA01	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Main Drainage System Valves - Accomplish a Class "B" overhaul to the following:				SY	2

- 1.1 Main Drain Suction Valve (1).
- 1.2 5" Angle Check Valves (8).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DRAINAGE AND BALLASTING	EIC GROUP	MAINTENANCE AND REPAIR
529A05A	TOTAL SHIPYARD COST	T607	

JCN      ITEM #      DESCRIPTION      M/D      MATLS      COST \$      ASSIGMT      PRI

1.      Bilge and Fuel Oil Tank Stripping Pump.

1.1      Overhaul in accordance with TRS 0529-086-\_\_\_\_\_.

1.2      Perform post overhaul testing of Bilge and Fuel Oil Stripping Pump in accordance with 1200 psi Propulsion Plant Test Procedure No. 529TD090012 (Bilge and Fuel Oil Tank Stripping Pump).

NOTE:      Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY(P) FA(A) 2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DISTILLING PLANT		JCN INDICATED BELOW	TITLE	
SWLIN	531A01A	TOTAL SHIPYARD COST		EIC GROUP	TK03	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

1. Distilling Plant No. 1 - Overhaul in accordance with TRS 0531-086-612 (DDG-37, 38, 39, 45, 46) or Class "B" overhaul.

(Includes evaporator and distiller frame, demisters and tie rods, weldings and fasteners, water boxes and baffles, sealing surfaces, seawater heater and after condenser, air ejector assembly, desuperheater and flow nozzle assembly, drain regulator and hot well, brine eductor, three way (distillate) trip valve, distillate water meter, pressure relief valves three (3), Y strainers, and pressure gage panel.)

2. Distilling Plant No. 2 - Overhaul in accordance with TRS 0531-086-612 (DDG-37, 38, 39, 45, 46) or Class "B" overhaul.

(Includes evaporator and distiller frame, demisters and tie rods, weldings and fasteners, water boxes and baffles, sealing surfaces, seawater heater and after condenser, air ejector assembly, desuperheater and flow nozzle assembly, drain regulator and hot well, brine eductor, three way (distillate) trip valve, distillate water meter, pressure relief valves three (3), Y strainers, and pressure gage panel.)

3. Perform post overhaul testing of No. 1 and 2 Distilling Plant in accordance with 1200 psi Propulsion Plant Test Procedure No. 531TK030022 (Distilling Plant). (Test includes distiller feed, heater drain, and distillate pumps.)

SY

2

SY

2

SY

2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET										
SWLIN		SYSTEM								
531A01*		DISTILLING PLANT								
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT	PRI	

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DISTILLING PLANT	EIC GROUP	MAINTENANCE AND REPAIR
531A02A	TOTAL SHIPYARD COST	TK03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Distiller Feed Pump No. 1 - Accomplish the following repairs:

1.1 Pump and Motor Adapter Ring - Overhaul in accordance with TRS 0531-086-\_\_\_\_\_.

SY 2

1.1.1 Replace suction and discharge 90 degree flexible hose assemblies one each (not in TRS).

1.2 Motor - Overhaul in accordance with TRS 0531-086-\_\_\_\_\_.

SY 2

1.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

2. Distiller Feed Pump No. 2 - Accomplish the following repairs:

2.1 Pump and Motor Adapter Ring - Overhaul in accordance with TRS 0531-086-\_\_\_\_\_.

SY 2

## SHIP SYSTEM WORK DESCRIPTION

NOTE: Pump testing covered in SWLIN 531A01\*.

**NOTE:** Additional repairs required in this SWLIN as a result of the POTSI are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DISTILLING PLANT	JCN INDICATED BELOW	TITLE
SWLIN	531A03A	TOTAL SHIPYARD COST	EIC GROUP TK03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
-----	--------	-------------	-----	---------	---------	---------	-----

1. Distiller Heater Drain Pump No. 1 - Accomplish the following repairs:

- |     |   |    |   |
|-----|---|----|---|
| 1.1 | Pump and Motor Adapter Ring - Overhaul in accordance with TRS 0531-086-_____.                   | SY | 2 |
| 1.2 | Motor - Overhaul in accordance with TRS 0531-086-_____.   | SY | 2 |
| 1.3 | Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following: | SY | 2 |

1.3.1 Clean and preserve controller enclosure.

1.3.2 Clean and tighten terminals and connectors. Align contactors.

1.3.3 Replace defective or deteriorated wiring and components within the controller enclosure.

2. Distiller Heater Drain Pump No. 2 - Accomplish the following repairs:

- |     |   |    |   |
|-----|---|----|---|
| 2.1 | Pump and Motor Adapter Ring - Overhaul in accordance with TRS 0531-086-_____.                   | SY | 2 |
| 2.2 | Motor - Overhaul in accordance with TRS 0531-086-_____.   | SY | 2 |
| 2.3 | Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following: | SY | 2 |



# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION	
SWLIN 531A03*	SYSTEM DISTILLING PLANT

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	2.3.1	Clean and preserve controller enclosure.					
	2.3.2	Clean and tighten terminals and connectors. Align contactors.					
	2.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					

NOTE: Pump testing covered in SWLIN 531A01\*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DESCRIPTION	JCN INDICATED BELOW	TITLE
SWLIN	531A04A	DISTILLING PLANT TOTAL SHIPYARD COST	EIC GROUP TK03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Distillate Pump No. 1 - Accomplish the following repairs:					
	1.1	Pump and Motor Adapter Frame - Overhaul in accordance with TRS 0531-086-____.				SY	2
	1.2	Motor - Overhaul in accordance with TRS 0531-086-____.				SY	2
	1.3	Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
	1.3.1	Clean and preserve controller enclosure.					
	1.3.2	Clean and tighten terminals and connectors. Align contactors.					
	1.3.3	Replace defective or deteriorated wiring and components within the controller enclosure.					
	2.	Distillate Pump No. 2 - Accomplish the following repairs:					
	2.1	Pump and Motor Adapter Frame - Overhaul in accordance with TRS 0531-086-____.				SY	2
	2.2	Motor - Overhaul in accordance with TRS 0531-086-____.				SY	2

# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION	
SWLIN 531A04*	SYSTEM DISTILLING PLANT
JCN	ITEM #

DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2
2.3.1 Clean and preserve controller enclosure.					
2.3.2 Clean and tighten terminals and connectors. Align contactors.					
2.3.3 Replace defective or deteriorated wiring and components within the controller enclosures.					

NOTE: Pump testing covered in SWLIN 531A01\*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DISTILLING PLANT		MAINTENANCE AND REPAIR
531A05A	TOTAL SHIPYARD COST	EIC GROUP	TK03

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
-----	--------	-------------	-----	---------	---------	---------	-----

1. Main Overboard Brine Pump No. 1 - Accomplish the following repairs:

- |     |   |    |   |
|-----|---|----|---|
| 1.1 | Pump and Motor Adapter Frame - Overhaul in accordance with TRS 0531-086-_____.                  | SY | 2 |
| 1.2 | Motor - Overhaul in accordance with TRS 0531-086-_____.   | SY | 2 |
| 1.3 | Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following: | SY | 2 |

- |       |  |
|-------|--|
| 1.3.1 | Clean and preserve controller enclosure.   |
| 1.3.2 | Clean and tighten terminals and connectors. Align contactors.                            |
| 1.3.3 | Replace defective or deteriorated wiring and components within the controller enclosure. |

2. Main Overboard Brine Pump No. 2 - Accomplish the following repairs:

- |     |  |    |   |
|-----|--|----|---|
| 2.1 | Pump and Motor Adapter Frame - Overhaul in accordance with TRS 0531-086-_____. | SY | 2 |
| 2.2 | Motor - Overhaul in accordance with TRS 0531-086-_____.                        | SY | 2 |

# CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION	
SWLIN 531A05*	SYSTEM DISTILLING PLANT
JCN	ITEM #
	DESCRIPTION
	M/D
	MATL \$
	COST \$
	ASSIGMT
	PRI

- 2.3 Motor Controller - Accomplish a Class "B" overhaul to include but not limited to the following:
  - 2.3.1 Clean and preserve controller enclosure.
  - 2.3.2 Clean and tighten terminals and connectors. Align contactors.
  - 2.3.3 Replace defective or deteriorated wiring and components within the controller enclosures.

NOTE: Pump testing covered in SWLIN 531A01\*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	POTABLE WATER	EIC GROUP	MAINTENANCE AND REPAIR
533A04A	TOTAL SHIPYARD COST	TB03	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Fresh Water Priming Pump No. 1 and 2 ~ Accomplish a Class "B" overhaul to Fresh Water Priming Pumps to include but not limited to:
  - 1.1 Shaft Bushing and Wearing Rings ~ Renew.
  - 1.2 Bearings - Inspect and replace as necessary.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

FA 2



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	POTABLE WATER	JCN INDICATED BELOW	TITLE
SWLIN	533A07A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			TB03	

JCN      ITEM #      DESCRIPTION      M/D      MATL\$      COST \$      ASSIGMT      PRI

1. Ship Service Potable Water Pump No. 1 and 2 - Accomplish the following repairs:

- 1.1 Pumps - Accomplish a Class "B" overhaul to two (2) potable water pumps to include but not limited to:

- 1.1.1 Shaft Bushings and Wearing Rings - Renew.

- 1.1.2 Bearings - Inspect and replace as necessary.

- 1.2 Motors - Accomplish a Class "B" overhaul to two (2) pump motors to include but not limited to:

- 1.2.1 Rotor and Stator - Inspect, rewind, dip, bake, and bench test as necessary.

- 1.2.2 Bearings - Inspect and replace as necessary.

- 1.3 Controllers - Accomplish a Class "B" overhaul to two (2) controllers to include but not limited to:

- 1.3.1 Clean and preserve controller enclosure.

- 1.3.2 Clean and tighten terminals and connectors. Align contactors.

- 1.3.3 Replace defective or deteriorated wiring and components within the controller enclosures.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SY 2

SY 2

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE	JCN
SWLIN	534A01A	TOTAL SHIPYARD COST	EIC GROUP TH01	MAINTENANCE AND REPAIR	
	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$

1. Perform post overhaul testing of Auxiliary Exhaust and Escape Systems in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH010022 (Auxiliary Exhaust and Escape Systems).

NOTE: Additional repairs required to auxiliary exhaust piping and valves, boiler escape piping and escape piping drains within propulsion machinery spaces as a result of the POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE
SWLIN	534A03A	TOTAL SHIPYARD COST	EIC GROUP	THO3

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. Auxiliary Steam System - Accomplish the following repairs:

1.1 Steam Reducing Valves - Class "B" overhaul the following (include bypass valves):

- 1.1.1 1200/12 psi augment valve (2).
- 1.1.2 1200/600 psi reducing valve (4).
- 1.1.3 600/150 psi reducing valve (6).
- 1.1.4 150/50 psi reducing valve (4).
- 1.1.5 150/12 psi reducing valve (2).
- 1.1.6 150/15 psi reducing valve (2).

1.2 Steam Reducing Station Relief Valves - Class "B" overhaul the following:

- 1.2.1 1200/12 psi relief valve (2).
- 1.2.2 1200/600 psi relief valve (4).
- 1.2.3 600/150 psi relief valve (6).
- 1.2.4 150/50 psi relief valve (4).
- 1.2.5 150/12 psi relief valve (2).
- 1.2.6 150/12 psi relief valve (2).

SY 2

SY 2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI

SWLIN  
534A03\*

AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX

- 1.3 1200 psi Valves and Associated Bypass -  
Accomplish a Class "B" overhaul to the valves listed in the following table. A Class "B" overhaul to the valves will include but not be limited to the valve disassembly and renewal of defective/worn seats, discs, stems, bonnets, and replacement of valve stem packing. Includes entire valve from in line piping joints to and including manual and remote operating gear; air motors for AS-1, AS-12, AS-37, and AS-58, valve internals, and associated bypass valves where installed.

NOTE: Welded in valves shall be repaired in place unless repairs require shop facilities.

<u>VALVE NUMBER</u>		<u>VALVE USAGE DESCRIPTION</u>	
AS-1		Stop, 1A Boiler	
AS-12		Stop, 1B Boiler	
AS-37		Stop, 2A Boiler	
AS-58		Stop, 2B Boiler	
5		Guard, 1A Boiler	
4		Guard, 1B Boiler	
17		Guard, 2A Boiler	

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## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 534A03*		SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX			
JCN	ITEM #	VALVE NUMBER	DESCRIPTION	M/D	MATL \$	COST \$
		VALVE NUMBER	VALVE USAGE DESCRIPTION	ASSIGMT	PRI	
		12	Guard, 2B Boiler			
		AS-3	Steam Inlet, 1A1 Forced Draft Blower			
		AS-2	Steam Inlet, 1A2 Forced Draft Blower			
		AS-29	Steam Inlet, 1B1 Forced Draft Blower			
		AS-10	Steam Inlet, 1B2 Forced Draft Blower			
		AS-39	Steam Inlet, 2A1 Forced Draft Blower			
		AS-32	Steam Inlet, 2A2 Forced Draft Blower			
		AS-55	Steam Inlet, 2B1 Forced Draft Blower			
		AS-56	Steam Inlet, 2B2 Forced Draft Blower			
		3	Throttle, 1A1 and 1A2 Forced Draft Blower			
		6	Throttle, 1B1 and 1B2 Forced Draft Blower			
		15	Throttle, 2A1 and 2A2 Forced Draft Blower			
		16	Throttle, 2B1 and 2B2 Forced Draft Blower			
		AS-7	Inlet, 1A 1200/600 PSI Reducer			
		AS-8	Inlet, 1B 1200/600 PSI Reducer			

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	SWLIN	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
534A03*				AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX					

VALVE NUMBERVALVE DESCRIPTION

AS-49	Inlet, 2A 1200/600 PSI Reducer
AS-38	Inlet, 2B 1200/600 PSI Reducer
600AS11	Outlet, 1A 1200/600 PSI Reducer
600AS16	Outlet, 1B 1200/600 PSI Reducer
600AS43	Outlet, 2A 1200/600 PSI Reducer
600AS44	Outlet, 2B 1200/600 PSI Reducer
19	Stop, 1A Boiler Superheater Protection Bleeder
23	Stop, 1B Boiler Superheater Protection Bleeder
20	Stop, 2A Boiler Superheater Protection Bleeder
24	Stop, 2B Boiler Superheater Protection Bleeder

2. Perform overhaul testing of Auxiliary Steam System in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH000042 (Auxiliary Steam System).

2.1	Prerequisites and Pressure Test - Phase I	SY	2
2.2	Prerequisites and Inspection - Phase I	SY	2
2.3	Prerequisites and Operation - Phase III	SY	2



# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

JCN	ITEM #	SYSTEM	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN 534A03*			AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX					

NOTE: Remote operators tested in SWLIN 253A01\*.

NOTE: Additional repairs required to piping and valves in the 1200 psi Auxiliary Steam System and 150 psi Auxiliary Steam System within propulsion machinery spaces as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE
SWLIN	534A04A	TOTAL SHIPYARD COST	EIC GROUP F101	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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1. Bottom and Surface Blow Systems No. 1A, 1B, 2A, and 2B Boilers - Accomplish a Class "B" overhaul of all valves, and renew piping with monel.

NOTE: SHIPALT DDG-37-1229K replaces bottom blow piping to the first boiler flange with monel.

2. Perform overhaul testing of bottom and surface blow piping in accordance with 1200 psi Propulsion Plant Test Procedure No. 534F1010022 (Boiler Blow Piping System).

2.1 Prerequisites and Pressure Test - Phase I

2.2 Prerequisites and Inspection - Phase I

2.3 Prerequisites and Operation - Phase III

FA	2
FA	2
FA	2

NOTE: To be accomplished only if SHIPALT DDG-37-1229K installed prior to this overhaul.

NOTE: Additional repairs required to bottom and surface blow piping and valves as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE
SWLIN	534A05A	TOTAL SHIPYARD COST	EIC GROUP TH04	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Steam Drain Collecting System.					
	1.1	Perform overhaul testing of Steam Drain Collecting System in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH000032 (Steam Drain Collecting System).					
	1.1.1	Prerequisites and Pressure Test - Phase I (HP Drain System)				SY	2
	1.1.2	Prerequisites and Inspection - Phase I				SY	2
	1.1.3	Prerequisites and Operation - Phase III				SY	2

NOTE: Additional repairs required to all piping and valves in the high and low pressure drain systems, fresh water system, inspection tank drain system and steam whistle drain system within propulsion machinery spaces as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE
SWLIN	534A07A	TOTAL SHIPYARD COST	EIC GROUP TH03	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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## 1. Main Turbine Gland Seal and Vent System

1.1 Gland Seal Regulating Valve - Overhaul four (4) valves in accordance with TRS 0534-086-\_\_.

SY 2

1.2 Gland Seal Excess Steam Unloading (Dump) Valve - Overhaul four (4) valves in accordance with TRS 0534-086-\_\_.

SY 2

2. Perform post overhaul testing of Gland Seal and Vent System in accordance with 1200 psi Propulsion Plant Test Procedure No. 534TH030022 (Gland Seal and Vent System). Test includes main turbine and SSTG gland seal and vent system SWLIN 534A08\*.

SY 2

NOTE: Additional repairs required to piping and valves in the Gland Seal and Vent System for the main turbines, gages and gage tubing and control air tubing and valves as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	JCN INDICATED BELOW	TITLE
SWLIN	534A08A	TOTAL SHIPYARD COST	EIC GROUP	THO3
				MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATLS      COST \$      ASSIGMT      PRI

1.      SSTG Gland Seal and Vent System Turbogenerators  
No. 1A, 1B, 2A and 2B.

1.1      Gland Seal Regulating Valves, four (4) -  
Accomplish a Class "B" overhaul to include  
but not limited to the following:

1.1.1      Clean valve body and internals.

1.1.2      Polish stems and guides, replace  
worn parts.

1.1.3      Machine and spot in disc and seat.

1.1.4      Replace spring, diaphragms, gaskets,  
seals, packing and fasteners.

1.1.5      Calibrate and adjust for proper  
operation.

1.2      Gland Seal Excess Steam Unloading Valves,  
four (4) - Accomplish a Class "B" overhaul  
to include but not limited to the following:

1.2.1      Clean valve body and internals.

1.2.2      Polish stems and guides, replace worn  
parts.

1.2.3      Machine and spot in disc and seat.

SY      2

SY      2

# SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN 534A08*	SYSTEM AUXILIARY STEAM AND DRAINS INSIDE MACHINERY BOX	
JCN	ITEM #	

PRI

ASSIGMT

COST \$

MATL \$

M/D

DESCRIPTION

1.2.4 Replace spring, diaphragms, gaskets, seals, packing and fasteners.

1.2.5 Calibrate and adjust for proper operation.

NOTE: Post overhaul testing of SSTG Gland Seal and Vent System covered in SWLIN 534A07\*.

NOTE: Additional repairs required to piping and valves in the Gland Seal and Vent System for the turbogenerators as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
536A01A	AUXILIARY FRESH WATER COOLING	PG00	MAINTENANCE AND REPAIR
	TOTAL SHIPYARD COST		

JCN	ITEM #	DESCRIPTION	M/D	MATLS	COST \$	ASSGMT	PRI
1.		AN/SPS-29 Radar Cooling System - Accomplish the following repairs:					
	1.1	Distilled Cooling Water Pump and Motor - Class "B" overhaul.				SY	2
	1.2	Heat Exchanger - Open, inspect and clean.				SY	2
	1.3	Dehydrator/Demineralizer - Clean and renew element.				FA	2
	1.4	Piping System - Hydrostatic test, clean and flush in accordance with 1200 psi Propulsion Plant Test Procedure No. 536PG000120. Refill with distilled water.				SY	2

NOTE: SA DDG-37-1009K which replaces radar with AN/SPS-49 also replaces cooling system.

- AN/SPS-48 (3D) Radar Cooling System - Accomplish the following repairs:
  - Salt Water Pump and Motor - Class "B" overhaul.
  - Distilled Cooling Water Pump and Motor - Class "B" overhaul two (2) pumps and motors.
  - Expansion Tank - Clean.
  - Heat Exchanger - Open, clean and inspect two (2) heat exchangers.

SY	2
SY	2
FA	2
SY	2

CONTINUATION SHEET

SHIP SYSTEM WORK DESCRIPTION

SWLIN 536A01*		SYSTEM	AUXILIARY FRESH WATER COOLING		
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$

PRI 2

SY

2.5 Piping System - Hydrostatic test, clean and flush in accordance with 1200 psi Propulsion Plant Test Procedure No. 536PG000100. Refill with distilled water.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

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# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	AUXILIARY FRESH WATER COOLING	EIC GROUP	MAINTENANCE AND REPAIR
536A02A	TOTAL SHIPYARD COST	RB00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	AN/SQS-23 or AN/SQQ-23 Sonar Cooling System - Accomplish the following repairs:					
	1.1	Circulating Pump - Class "B" overhaul.				SY	2
	1.2	Strainer - Clean.				FA	2
	1.3	Heat Exchanger - Open, clean and inspect.				SY	2
	1.4	Piping System - Hydrostatic test, clean and flush in accordance with 1200 psi Propulsion Plant Test Procedure No. 536RB000040. Refill with distilled water.				SY	2

NOTE: Additional repairs required in this SWLIN as a result  
of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	AUXILIARY FRESH WATER COOLING	EIC GROUP	MAINTENANCE AND REPAIR
	TOTAL SHIPYARD COST		
536A06A		TB04	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		AN/SPG-55 Radar Cooling System - Accomplish the following repairs:					
	1.1	Cooling Water Pump and Motor - Class "B" overhaul two (2) pumps and motors.				SY	2
	1.2	Heat Exchanger - Open, inspect and clean two (2) heat exchangers.				SY	2
	1.3	Strainer - Clean.				FA	2
	1.4	Micron Filter - Replace				FA	2
	1.5	Demineralizer - Clean and renew elements of two (2) demineralizers.				SY	2
	1.6	Expansion Tank - Open, clean and inspect.				FA	2
	1.7	Piping System - Hydrostatic test, clean and flush in accordance with 1200 psi Propulsion Plant Test Procedure No. 536TB040080. Refill with distilled water.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SHIP FUEL & FUEL COMPENSATING	EIC GROUP	MAINTENANCE AND REPAIR
541A01A	TOTAL SHIPYARD COST	TD09	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
1.		Fuel Oil Transfer Pump No.1 and 2 - Accomplish the following repairs:					
	1.1	Pumps - Overhaul in accordance with TRS 0541-086-_____.				SY	2
	1.2	Motors - Overhaul in accordance with TRS 0541-086-_____.				SY	2
	1.3	Controllers - Class "B" overhaul to include but not limited to:				SY	2
	1.3.1	Clean and preserve controller enclosure.					
	1.3.2	Clean and tighten terminals and connectors. Align contactors.					
	1.3.3	Replace defective or deteriorated wiring and components within the controller enclosures.					
	1.4	Perform post overhaul test of No. 1 and 2 Fuel Oil Transfer Pumps in accordance with 1200 psi Propulsion Plant Test Procedure No. 541TD090022 (Fuel Oil Transfer Pump).				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

SHIP NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
	SHIP FUEL & FUEL COMPENSATING		MAINTENANCE AND REPAIR
541A03A	TOTAL SHIPYARD COST	EIC GROUP	TD06

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Fuel Oil Filling System					
	1.1	Perform overhaul testing of the Fuel Oil Filling Transfer and Stripping System in accordance with 1200 psi Propulsion Plant Test Procedure No. 541TD000022 (Fuel Oil Fill, Transfer and Stripping System).					
	1.1.1	Prerequisites and Flush - Phase I				SY	2
	1.1.1.2	Prerequisites and Pressure Test - Phase I (Arrival)				SY	2
	1.1.1.3	Prerequisites and Pressure Test - Phase I (Post Repair)				SY	2
	1.1.1.4	Prerequisites and Inspection - Phase I (Omit inspections and coating of tanks - see SWLIN 123A02*).				SY	2
	1.1.1.5	Prerequisites and Operation - Phase III				SY	2

NOTE: Additional repairs required to fuel oil piping, valves and valve manifolds associated with taking or discharging fuel oil to/from the ship as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	SHIP FUEL & FUEL COMPENSATING	EIC GROUP	MAINTENANCE AND REPAIR
541A04A	TOTAL SHIPYARD COST	TD08	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1. Fuel Oil Transfer System

NOTE: Post overhaul testing of the Fuel Oil Transfer System in conjunction with 1200 psi Propulsion Plant Test Procedure No. 541TD000022 performed on SWLIN 541A03\*.

NOTE: Additional repairs required to fuel oil transfer piping, valves and valve manifolds associated with transfer of fuel oil within the ship as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMPRESSED AIR	JCN INDICATED BELOW	TITLE
551A01A	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
SW: JN			TF01	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. High Pressure Air System - Accomplish the following repairs:
  - 1.1 Air Flasks and Separators - Clean, inspect and test four (4) high pressure air flasks and four (4) separators, record data, certify and install test data plates. SY 2
  - 1.2 Dehydrators - Class "B" overhaul two (2) dehydrators. SY 2
  - 1.3 Piping
    - 1.3.1 Repair/replace leaking valves. SY 2
    - 1.3.2 Clean, flush and hydrostatic test.

NOTE: Additional repairs required to high pressure air piping and valves, dehydrators and associated drains, relief valves, pressure regulating and reducing valves as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMPRESSED AIR	JCN INDICATED BELOW	TITLE
SWLIN	551A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			TF03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Low Pressure Air System Dehydrators - Accomplish a Class "B" overhaul of _____ dehydrators.				SY	2
	2.	Perform overhaul test of Low Pressure/Control Air System in accordance with 1200 psi Propulsion Plant Test Procedure No. 551TF000022 (Low Pressure/ACC Air System).					
	2.1	Prerequisites and Flush - Phase I				SY	2
	2.2	Prerequisites and Pressure Test - Phase I				SY	2
	2.3	Prerequisites and Inspection - Phase I				SY	2
	2.4	Prerequisites and Operation - Phase II				SY	2

NOTE: Additional repairs required to low pressure and control air piping from cutout valve upstream from the pressure regulator valves to the actuated valves; dampers; motors; pneumatic cylinders, etc., air and moisture separators; filters; associated cutout and bypass valves; (does not include air pilot controllers, air-actuated valves and air motors) as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMPRESSED AIR	JCN INDICATED BELOW	TITLE
SWLIN	551A03A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			TF01	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. High Pressure Air Compressor No. 1 - Accomplish the following repairs:

- 1.1 Compressor - Overhaul in accordance with TRS 0551-086-\_\_\_.

SY 2

- 1.2 Compressor Motor - Overhaul in accordance with TRS 0551-086-\_\_\_.

SY 2

2. High Pressure Air Compressor No. 2 - Accomplish the following repairs:

- 2.1 Compressor - Overhaul in accordance with TRS 0551-086-\_\_\_.

SY 2

- 2.2 Compressor Motor - Overhaul in accordance with TRS 0551-086-\_\_\_.

SY 2

3. Perform post overhaul of No. 1 and 2 High Pressure Air Compressors in accordance with 1200 psi Propulsion Plant Test Procedure No. 550TF010022 (High Pressure Air Compressor).

SY 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	COMPRESSED AIR	JCN INDICATED BELOW	TITLE
SWLIN	551A04A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			TF03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
-----	--------	-------------	-----	---------	---------	--------	-----

1. Low Pressure Air Compressor No. 1 - Accomplish the following repairs:

1.1 Compressor - Accomplish a Class "B" overhaul to include but not limited to:

SY 2

1.1.1 Inspecting and replacing as necessary all bearings, seals, rings, valves and cylinder liners.

1.1.2 Inspect and repair as necessary the lube oil pump, lubricator pyrometer, wiring and thermocouples.

1.1.3 Calibrate gages, thermometers and relief valves.

1.2 Motor - Accomplish a Class "B" overhaul to include but not limited to:

SY 2

1.2.1 Rotor and Stator - Inspect, rewind, dip, bake and bench test as necessary.

1.2.2 Bearings - Inspect and replace as necessary.

2. Low Pressure Air Compressor No. 2 - Accomplish the following repairs:

2.1 Compressor - Accomplish a Class "B" overhaul to include but not limited to:

SY 2

2.1.1 Inspecting and replacing as necessary all bearings, seals, rings, valves and cylinder liners.

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN	551A04*	SYSTEM COMPRESSED AIR					
	2.1.2	Inspect and repair as necessary the lube oil pump, lubricator pyrometer, wiring and thermocouplers.					
	2.1.3	Calibrate gages, thermometers and relief valves.					
	2.2	Motor - Accomplish a Class "B" overhaul to include but not limited to:					
	2.2.1	Rotor and Stator - Inspect, rewind, dip, bake and bench test as necessary.					
	2.2.2	Bearings - Inspect and replace as necessary.					
	3.	Low Pressure Air Compressor No. 3 - Accomplish the following repairs:					
	3.1	Compressor - Accomplish a Class "B" overhaul to include but not limited to:					
	3.1.1	Inspecting and replacing as necessary all bearings, seals, rings, valves and cylinder liners.					
	3.1.2	Inspect and repair as necessary the lube oil pump, lubricator pyrometer, wiring and thermocouplers.					
	3.1.3	Calibrate gages, thermometers and relief valves.					

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## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM	COMPRESSED AIR						
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT	PRI
	551A04*								
		3.2 Motor - Accomplish a Class "B" overhaul to include but not limited to:						SY	2
		3.2.1 Rotor and Stator - Inspect, rewind, dip, bake and bench test as necessary.							
		3.2.2 Bearings - Inspect and replace as necessary.							
		4. Low Pressure Air Compressor No. 1 - Accomplish the following repairs:							
		4.1 Compressor - Accomplish a Class "B" overhaul to include but not limited to:						SY	2
		4.1.1 Inspecting and replacing as necessary all bearings, seals, rings, valves, and cylinder liners.							
		4.1.2 Inspect and repair as necessary the lube oil pump, lubricator pyrometer, wiring and thermocouplers.							
		4.1.3 Calibrate gages, thermometers and relief valves.							
		4.2 Motor - Accomplish a Class "B" overhaul to include but not limited to:						SY	2
		4.2.1 Rotor and Stator - Inspect, rewind, dip, bake and bench test as necessary.							
		4.2.2 Bearings - Inspect and replace as necessary.							

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN	SYSTEM	COMPRESSED AIR						
551A04*								

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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- |    |  |  |  |  |  |    |   |
|----|--|--|--|--|--|----|---|
| 5. |  | Perform post overhaul test of No. 1,2,3, and 4 Low Pressure Air Compressors in accordance with 1200 psi Propulsion Plant Test Procedure No. 550TF030012 (Low Pressure Air Compressor) or 550TF030023 (Low Pressure Air Compressor - Oil Free). |  |  |  | SY | 2 |
|----|--|--|--|--|--|----|---|

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	FIRE EXTINGUISHING		JCN INDICATED BELOW	TITLE
SWLIN	555A01A	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
				T900	

JCN                      ITEM #                      DESCRIPTION                      M/D                      MATL \$                      COST \$                      ASSIGMT                      PRI

1.      Fire Fighting Systems

- 1.1      Perform post overhaul testing of and certify Main Machinery Spaces Fire Fighting System in accordance with 1200 psi Propulsion Plant Test Procedure No. 555T9000022 (Fire Fighting in Main Machinery Spaces). Provide Ship Commanding Officer with copy of completed test procedure.

SY      2

NOTE:      Certification shall be IAW 1200 psi test and certification manual.

NOTE:      Additional repairs required to foam cans, foam solution tanks, proportioners, carbon dioxide/chemical systems (fixed or portable) as a result of POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	STEERING AND DIVING CONTROL	JCN INDICATED BELOW	TITLE
SWLIN	561A01A	TOTAL SHIPYARD COST	EIC GROUP TL01	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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## 1. Steering Gear - Accomplish the following repairs:

1.1 Hydraulic Pumps, Two (2) - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

1.1.1 Replace bearings, seals, gaskets, "O" rings and damaged fasteners.

1.1.2 Replace damaged or worn cylinders, pistons, connecting links, bushings and sleeves.

1.1.3 Repair couplings, install new lube seals.

1.1.4 Replace relief valve springs and adjust lifting pressure.

1.2 Resilient Mounts - Replace four (4).

SY 2

1.3 Flexible Connectors - Replace the following on each pump:

SY 2

1.3.1 One (1) 90 degree suction assembly

1.3.2 Two (2) 90 degree discharge assemblies

1.3.3 Two (2) gage lines

1.4 Hydraulic Pump Motors, Two (2) - Accomplish a Class "B" overhaul to include but not limited to the following:

SY 2

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 561A01*		SYSTEM	STEERING AND DIVING CONTROL						
JCN	ITEM #	DESCRIPTION			M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.4.1	Clean, bake and test stator windings.							
	1.4.2	Replace bearings.							
	1.4.3	Balance rotating assembly.							
	1.5	Motor Controller, Two (2) - Accomplish a Class "B" overhaul to include but not limited to the following:						SY	2
	1.5.1	Clean and preserve controller enclosure.							
	1.5.2	Clean and tighten terminals and connectors. Align contactors.							
	1.5.3	Replace defective or deteriorated wiring and components within the controller enclosure.							
	1.6	Rams No. 1 and 2 - Hone and polish, replace ram seal packing and wiper rings.						SY	2
	1.7	Clean and flush hydraulic system, sample and certify clean.						SY	2

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN 561A01*	SYSTEM	STEERING AND DIVING CONTROL				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT PRI

NOTE: Additional repairs required to hydraulic cylinders; steering console with transmitters and receivers, hydraulic piping, oil storage tanks not built in, replenishing piping and valves, hydraulic servo system piping and valves, hand hydraulic emergency steering and filling pumps, panel mounted gages, indicators, pointers, linkages, control devices synchro receivers and transmitters, and differential assemblies as a result of POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	RUDDER	EIC GROUP	MAINTENANCE AND REPAIR
562A01A	TOTAL SHIPYARD COST	TL01	
JCN	ITEM #	DESCRIPTION	M/D MATL \$ COST \$ ASSIGMT PRI

1. Rudder - Accomplish repairs to rudder and rudder weldment authorized as a result of inspection conducted under SWLIN 986A01\* (Item No. 2), to include but not limited to the following:

- 1.1 Replace packing or chevron seals.
- 1.2 Clean, inspect, take and record readings, and lubricate bearings.
- 1.3 Repair rudder and rudder weldment as authorized following inspection conducted under SWLIN 986A01\* (Item No. 2).
- 1.4 Air test and preserve.

NOTE: Additional repairs will be determined as a result of the drydock inspection.

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	REPLENISHMENT AT SEA	EIC GROUP	MAINTENANCE AND REPAIR
571A02A	TOTAL SHIPYARD COST	TT09	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGNMT      PRI

1. Repair FAS Stations as authorized following inspection conducted under SWLIN 986A01\*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ANCHOR HANDLING AND STOWAGE	JCN INDICATED BELOW	TITLE
SWLIN	581A01A	TOTAL SHIPYARD COST	EIC GROUP	TM00
				MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

1. Anchor Handling System - Accomplish the following repairs:

1.1 Remove two (2) anchor chains from ship, sandblast, inspect and repair deficiencies resulting from inspection. SY 2

1.2 Preserve anchor chains and paint identifying links, reinstall chains, reversing end for end in accordance with NSTM Chapter 9260. SY 2

1.3 Conduct magnetic particle inspection of 8000 lb balanced anchor in accordance with MIL-STD-271. Repair deficiencies resulting from inspection conducted in accordance with NAVSEA letter 93422/MTA Ser. 1649 of 14 April 1976. SY 2

NOTE: Additional repairs required to chain compressors, pelican hooks and turnbuckles, hawse and chain pipes, anchor windlass, windlass motor and controller, remote operating station, brake and brake operating gear as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	BOAT HANDLING AND STOWAGE		MAINTENANCE AND REPAIR
583A01A	TOTAL SHIPYARD COST	EIC GROUP YC03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Boat Davit (Port) No. 2 - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2

1.1 Check davit trackways for cracks and distortion and repair; assure trackways are parallel.

1.2 Replace sheave bearings/bushings and sheave pins in trackways, davit heads and deck fair leads.

1.3 Replace trackway roller bearings/bushings and pins.

1.4 Repair and adjust limit and cut-out switches.

1.5 Clean and inspect wire rope for broken or excessively worn strands, condition of poured sockets and evidence of kinking. Equalize falls fore and aft.

1.6 Test fit of boat in storage, modify keel rest, hull pads and chocks as required.

1.7 Perform post overhaul static, dynamic and working load test; stamp and affix label plate with data and date test conducted.

2. Boat Davit Winch (Port) No. 2 - Accomplish a Class "B" overhaul of winch to include but not limited to the following:

2.1 Replace bearings, sleeves, bushings and lube seals in gearcase, drum shaft assembly, spooling device and clutch mechanism.

SY 2

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## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM					
583A01*			BOAT HANDLING AND STOWAGE				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI

- 2.2 Replace motor bearings; clean and bake stator windings.
- 2.3 Clean, tighten terminals and connections, replace and align contactors in motor controller.
- 2.4 Smooth brake drum surfaces, replace brake friction linings; repair and free up brake operating linkages.
- 2.5 Inspect gearing, remove burrs and raised surfaces, adjust thrust and clearances.
- 2.6 Perform post overhaul static, dynamic and working load tests in conjunction with test of davit.

NOTE: Additional repairs required to 26 ft. personnel boat, handling and stowage equipment as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
	BOAT HANDLING AND STOWAGE		
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
583A02A		YC03	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Boat Davit No. 3 - Accomplish a Class "B" overhaul to include but not limited to the following:

- 1.1      Check davit trackways for cracks and distortion and repair; assure trackways are parallel.
- 1.2      Replace sheave bearings/bushings and sheave pins in trackways, davit heads and deck fair leads.
- 1.3      Replace trackway roller bearings/bushings and pins.
- 1.4      Repair and adjust limit and cut-out switches.
- 1.5      Clean and inspect wire rope for broken or excessively worn strands, condition of poured sockets and evidence of kinking. Equalize falls fore and aft.
- 1.6      Test fit of boat in storage, modify keel rest, hull pads and chocks as required.
- 1.7      Perform post overhaul static, dynamic and working load test; stamp and affix label plate with data and date test conducted.

2.      Boat Davit Winch No. 3 - Accomplish a Class "B" overhaul of winch to include but not limited to the following:

SY      2



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 583A02*		SYSTEM	BOAT HANDLING AND STOWAGE						
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI		

- 2.1 Replace bearings, sleeves, bushings and lube seals in gearcase, drum shaft assembly, spooling device and clutch mechanism.
- 2.2 Replace motor bearings; clean and bake stator windings.
- 2.3 Clean, tighten terminals and connections, replace and align contactors in motor controller.
- 2.4 Smooth brake drum surfaces, replace brake friction linings; repair and free up brake operating linkages.
- 2.5 Inspect gearing, remove burrs and raised surfaces, adjust thrust clearances.
- 2.6 Perform post overhaul static, dynamic and working load tests in conjunction with test of davit.

NOTE: Additional repairs required to 33 ft. utility boat, handling and stowage equipment as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	BOAT HANDLING AND STOWAGE	EIC GROUP	MAINTENANCE AND REPAIR
	TOTAL SHIPYARD COST		
583A03A		YC03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	1.	Boat Davit (Starboard) No. 1 - Accomplish a Class "B" overhaul to include but not limited to the following:				SY	2

1.1 Check davit booms for cracks and distortion and repairs; ensure booms are parallel.

1.2 Replace sheave bearings/bushings and sheave pins in davit heads and deck fair leads.

1.3 Replace boom bearings/bushing and pins.

1.4 Repair and adjust limit and cut-out switches.

1.5 Clean and inspect wire rope for broken or excessively worn strands, condition or poured sockets and evidence of kinking. Equalize falls fore and aft.

1.6 Test fit of boat in stowage, modify keel rest, hull pads and chocks as required.

1.7 Perform post overhaul static, dynamic and working load tests; stamp and affix label plate with data and date test conducted.

2. Boat Davit Winch (Starboard) No. 1 - Accomplish a Class "B" overhaul to include but not limited to the following:

2.1 Replace bearings, sleeves, bushings and lube seals in gearcase, drum shaft assembly, spooling device and clutch mechanism.

SY 2

# CONTINUATION SHEET

JCN		ITEM #	SYSTEM	BOAT HANDLING AND STOWAGE	M/D	MATL \$	COST \$	ASSIGMT	PRI
SWLIN									
583A03*									

## DESCRIPTION

- 2.2 Replace motor bearings; clean and bake stator windings.
- 2.3 Clean, tighten terminals and connections, replace and align contactors in motor controller.
- 2.4 Smooth brake drum surfaces, replace brake friction linings; repair and free up brake operating linkages.
- 2.5 Inspect gearing, remove burrs and raised surfaces, adjust thrust and clearances.
- 2.6 Perform post overhaul static, dynamic, and working load tests in conjunction with test of davit.

NOTE: Additional repairs required to motor whale boat, and handling and stowage equipment as a result of the POT&I are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	BOAT HANDLING AND STOWAGE		MAINTENANCE AND REPAIR
	TOTAL SHIPYARD COST	EIC GROUP YA03	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		CO2 Inflatable Boat, MK 5 - Accomplish the following repairs:					
	1.1	Perform test of inflatable boats and hydrostatic releases in accordance with NSTM 9820.				SY (A) FA (P)	2
	1.2	Inspect boats and boat equipment, accomplish repairs resulting from test and inspections in accordance with NAVSHIPS 250-524-4.				SY (A) FA (P)	2
	1.3	Complete, in duplicate for each boat, NAVSHIPS 9820/1 and forward to ship's Commanding Officer.				SY (A) FA (P)	2

NOTE: SHIPALT DDG-37-1219K installs encapsulated life rafts.

NOTE: Additional repairs required to inflatable boats and boat equipment, carrying case, hydrostatic releases, securing devices, stowage and rigging as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	ENVIRONMENTAL POLLUTION CONTROL	EIC GROUP	MAINTENANCE AND REPAIR
593A01A	TOTAL SHIPYARD COST	A904	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Sewage collection, holding and transfer tanks (CHT).

(Includes the structural compartmentation of the tanks and the access manholes.)

1.1      Clean and inspect CHT tanks.

1.1.1      Inspect tank coating for blisters, peeling and deterioration.

1.1.2      Inspect level sensors for material condition and operability.

1.1.3      Inspect washdown system for material condition and operability.

1.1.4      Submit report of conditions to Type Commander and Ship's Commanding Officer.

1.2      Accomplish structural repairs authorized as a result of the inspection performed in 2.1 above. (Reservation)

NOTE:      Coating of tanks covered on SWLIN 631A01\*.

NOTE:      Applicable only if SHIPALT DLG6-1005 has been previously accomplished.

SY      2

SY      2

PART 3.6

MAJOR SHIP SYSTEM 6



MAJOR SHIP SYSTEM 6 - OUTFIT AND FURNISHINGS

602	HULL DESIGNATING AND MARKING
611	HULL FITTINGS
631	PAINTING
633	CATHODIC PROTECTION
634	DECK COVERING
638	REFRIGERATED SPACES
655	LAUNDRY SPACES
665	WORKSHOPS, LABS, TEST AREAS (INCLUDING PORTABLE TOOLS, EQUIPMENT)

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	HULL DESIGNATING AND MARKING	EIC GROUP	MAINTENANCE AND REPAIR
602A01A	TOTAL SHIPYARD COST	UF08	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

- Machinery, Valve, Pipe and Cable Markings

(Includes label plates and tags, pipe and machinery identification stencils, safety and warning plates and markings, Damage Control classification labels and plates, instructional diagrams and plates.)

1.1 Replace illegible, missing or incorrect warning, instructional, safety and component identification labels, tags and plates on machinery, equipment, valves and fittings. FA 2

1.2 Replace missing, illegible or incorrect cable tags on electrical and electronic cables and wiring. FA 2

1.3 After completion of interior compartment painting, restore identifying and direction-of-flow markings on piping.

1.3.1 Compartments painted by shipyard. FA 2

1.3.2 Compartments painted by ship's force. FA 2

NOTE: See SWLIN 631A01\* Painting.

- At commencement of overhaul, submit a list to Type Commander of items which are beyond the capability of Forces Afloat. FA 2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	HULL FITTINGS	EIC GROUP	MAINTENANCE AND REPAIR
611A01A	TOTAL SHIPYARD COST	1100	
JCN	ITEM #	DESCRIPTION	M/D
			MATL \$
			COST \$
			ASSGMT
			PRI

1. Repair two (2) propeller guards as authorized after inspection conducted under SWLIN 986A01\*.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	PAINTING	JCN INDICATED BELOW	TITLE
SWLIN	631A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			UF06	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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## 1. Hull Painting

1.1 Sandblast and paint the entire underwater area of ship, including appendages and inaccessible voids from keel to six (6) inches above the upper boot top line, with formula 150 epoxy series paint.

SY 2

1.1.1 Clean and wire brush all main and auxiliary sea chest and hull openings. Paint in conjunction with hull painting.

1.2 Stage, abrasive blast and paint ships hull from upper boot top limits to main deck edge. Cut in and paint hull markings.

SY(P) NA (A) 2

2. Fresh and Feedwater Tanks - After the completion of structural repairs, prepare, prime and paint interior surfaces of tanks in accordance with NSTM Chapter 9190, Paragraph 9190.171.

SY 2

NOTE: Inspection and structural repairs covered under SWLIN 123A03\*.

3. Fuel Oil and Ballast Tanks - Preserve fuel oil and ballast tanks. SEE NOTE (RESERVATION).

SY 2

NOTE: Fuel oil tank preservation to be approved by Type Commander (as conditions warrant for individual tanks) as a result of the inspection conducted in item 1 and 3 SWLIN 123A02\*.

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 631A01*		SYSTEM	PAINTING				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
	4.	Chain Locker Preservation - After removal of anchor chains prepare chain locker and apply inorganic zinc coating, MIL-P-23236, Type I, Class 3, Post-Curing type in accordance with NSTM Chapter 9190.				SY	2
	5.	Machinery Space Bilges				SY	2
	5.1	Prepare and chemically clean the following bilge areas in the Engineering Spaces:					
	5.1.1	Pump Rm. No. 2					
	5.1.2	Pump Rm. No. 1					
	5.1.3	Fire Rm. No. 1					
	5.1.4	Eng. Rm. No. 1					
	5.1.5	Fire Rm. No. 2					
	5.1.6	Eng. Rm. No. 2					
	5.1.7	Bilge Sump					
	5.1.8	Bilge Sump					
	5.1.9	Bilge Sump					
	5.1.10	Bilge Sump					
	5.1.11	Shaft Alley No. 1					
	5.1.12	Shaft Alley No. 2					

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #						
SWLIN 631A01*		PAINTING					
	5.2	Apply high performance paint system to cleaned bilge areas in above spaces including piping, supports, braces, hanger, structural members, foundations and hull plating below the lower level floor plating and in the same horizontal plane.					
	6.	Sewage Collecting, Holding and Transfer (CHT) Tanks				SY	2
	6.1	After completion of structural repairs, prepare surfaces for preservation.					
	6.2	Apply protective coating in accordance with MIL-P-23236 and MIL-D-21631.					
	NOTE:	Inspection and structural repairs covered under SWLIN 593A01*.					
	7.	Machinery Foundations - Prepare and paint machinery foundations above bilge level in following spaces:				FA	2
	7.1	Pump Rm. No. 2.					
	7.2	Pump Rm. No. 1.					
	7.3	Pump Rm. No. 1.					
	7.4	Eng. Rm. No. 1					
	7.5	Fire Rm. No. 2					
	7.6	Eng. Rm. No. 2					
	7.7	Shaft Alley No. 1					
	7.8	Shaft Alley No. 2					



## SHIP SYSTEM WORK DESCRIPTION

**NOTE:** Additional preservation and painting of interior and exterior surfaces and areas of hull, superstructure, structural and non-structural bulkheads, overheads, decks, foundations, bedplates and tank tops, bilges, escape and loading trunks, machinery and equipment as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CATHODIC PROTECTION	JCN INDICATED BELOW	TITLE
SWLIN	633A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			1106	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
		1. Cathodic Protection System (Sacrificial) - Replace all zinc anodes in accordance with NSTM 9190.241 and 9190.242.				SY	2

(Includes zinc anodes and fasteners on ship's under water body, and appendages).

NOTE: Bolted type to be installed vice welded strap type to facilitate replacement by divers.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CATHODIC PROTECTION	JCN INDICATED BELOW	TITLE
SWLIN	633A02A	TOTAL SHIPYARD COST	EIC GROUP 1106	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Cathodic Protection System (Impressed Current)      SY      2

(Includes impressed current anodes, power supply, amplifier control, shafting and rudder grounding straps.)

- 1.1 Replace deteriorated or damaged impressed current anodes, shafting and rudder grounding straps in accordance with report submitted under SWLIN 986A01\* (Item No. 2) and approved by Type Commander.

NOTE: Item 1. is required only if SHIPALT DLG-6-1097 has been previously accomplished.

NOTE: Additional repairs required in this SWLIN as a result of the POT&I and drydock inspection are as follows:



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	DECK COVERING	EIC GROUP	MAINTENANCE AND REPAIR
634A01A	TOTAL SHIPYARD COST	1601	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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	1.	Rubber Matting - Replace deteriorated rubber matting with approved matting (approximately 32 compartments).				FA	2
--	----	---	--	--	--	----	---

	2.	Tile - Replace deteriorated tile with approved vinyl asbestos tile (approximately 63 compartments).				FA	2
--	----	---	--	--	--	----	---

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	REFRIGERATED SPACES	JCN INDICATED BELOW	TITLE
SWLIN	638A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			1000	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
-----	--------	-------------	-----	---------	---------	---------	-----

	1.	Repair reefer doors to include but not limited to the following:				FA	2
--	----	--	--	--	--	----	---

	1.1	Gaskets - Replace.					
--	-----	--------------------	--	--	--	--	--

	1.2	Dogs and Hinges - Replace as necessary.					
--	-----	---	--	--	--	--	--

	2.	Replace reefer drip pan heating element.					
--	----	--	--	--	--	--	--

						FA	3
--	--	--	--	--	--	----	---

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	LAUNDRY SPACES	JCN INDICATED BELOW	TITLE
SWLIN	655A01A	TOTAL SHIPYARD COST	EIC GROUP 1A01	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

## 1. Laundry Equipment

1.1 Washer-Extractor - Replace two (2) with new units.

SY 2

NOTE: If replacement unit is not available, Class "B" overhaul.

1.2 Clothes Dryer - Accomplish repairs to two (2) dryers to include but not limited to:

SY 2

1.2.1 Bearings - Replace.

1.2.2 Thermostat - Replace.

NOTE: Additional repairs required to washers, presses, and irons, dryers, marking machines, shelves and bins, baskets, tubs, scales, lockers, tables and chairs as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM WORKSHOPS, LABS, TEST AREAS (INCLUDING PORTABLE TOOLS, EQUIP)	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
665A01A		1900	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Machine Shop Lathe - Accomplish a Class "B" overhaul.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

PART 3.7

MAJOR SHIP SYSTEM 7

MAJOR SHIP SYSTEM 7 - ARMAMENT

721	LAUNCHING DEVICES (MISSILES AND ROCKETS)
722	MISSILE, ROCKET AND GUIDANCE CAPSULE HANDLING
728	MISSILE HEATING, COOLING, TEMPERATURE CONTROL
751	TORPEDO TUBES



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	LAUNCHING DEVICES (MISSILES AND ROCKETS)	JCN INDICATED BELOW	TITLE
SWLIN	721A01A	TOTAL SHIPYARD COST	EIC GROUP 5AAD	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		Guided Missile Launching System MK 10 - Accomplish the following repairs:					
	1.1	MK 5 MOD 3 Launcher - Class "B" Overhaul.				SY	2
	1.2	Seals - Replace on blowout hatches.				FA	2
	1.3	Span Rails - Realign.				SY	2
	1.4	Loader Rails - Realign.				SY	2
	1.5	Securing Latch - Realign.				SY	2

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	LAUNCHING DEVICES (MISSILE AND ROCKET)	JCN INDICATED BELOW	TITLE
SWLIN	721A02A	TOTAL SHIPYARD COST	EIC GROUP JJ00	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL\$      COST \$      ASSIGMT      PRI

1.      MK 112Mod ( ) ASROC Launcher

1.1      Replace launcher with restored launcher from  
turnaround program, or

1.2      Accomplish a Class "B" overhaul of launcher in  
accordance with NAVORD OD 18383.

1.3      Test launcher in accordance with requirement  
of \_\_\_\_\_.

NOTE:      Combat System Battery Alignment performed under  
SWLIN 986A03\*.

NOTE:      Additional repairs required to Launcher Support  
Systems and "station" as a result of the POT&I are  
as follows:

SY      2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	MISSILE, ROCKET, AND GUIDANCE CAPSULE HANDLING	JCN INDICATED BELOW	TITLE
SWLIN	722A01A	TOTAL SHIPYARD COST	EIC GROUP JF00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
						SY	2

1. ASROC Handling Equipment - Perform static and dynamic load testing, inscribe label plates with data and date test performed and affix to equipment tested. (Ref. Document OP 2173, Vol 1, 2, 3)

1.1 MK 28/1 truck adapter

1.2 Boom

1.3 MK 75/0 sling

1.4 MK 99/0 sling

1.5 MK 102/0 sling

1.6 Hoist

1.7 MK 42/1 hand truck

1.8 MK 42/2 hand truck

1.9 MK 45/0 hand truck

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	MISSILE, ROCKET, AND GUIDANCE CAPSULE HANDLING	JCN INDICATED BELOW	TITLE
SWLIN	722A02A	TOTAL SHIPYARD COST	EIC GROUP JF00	MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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1. ASROC Loader (Bridge) Crane - Class "B" overhaul, perform static and dynamic load testing, inscribe label plates data and date test performed and affix to equipment tested - ASROC loader crane. (Ref. NS 0978-054-2010, Type 1).

2. Terrier Missile Transfer Carriage - Class "B" overhaul (ShipAlt DDG-37-0318D and DDG-37-1270 apply).

NOTE: Additional repairs required in this SWLIN as a result of the POT&I are as follows:

SY 2

SY 2

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	MISSILE HEATING, COOLING, TEMPERATURE CONTROL	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
728A01A			TB04	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. ASROC Heating and Cooling System - Accomplish the following repairs:

1.1 ASROC Seawater Heat Exchanger - Conduct hydro-static test of heat exchanger in accordance with NAVSEA 997-000-4010 to determine repairs required.

SY 2

1.2 Clean, flush and hydro the ASROC heating and cooling system while heat exchanger and heater are removed. Submit a report of hydro results to Type Commander.

SY 2

1.3 Recharge cooling system, test operate, submit a report of test result to Type Commander.

SY 2

NOTE: Additional repairs required to circulating pumps, coolant piping, proportioners and valves, expansion tank, temperature controls and alarms, and flow controllers as a result of the POT&I are as follows:

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	TORPEDO TUBES	EIC GROUP	MAINTENANCE AND REPAIR
751A01A	TOTAL SHIPYARD COST	JDGI	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Torpedo Tubes - Replace seals on MK 32 Torpedo Tube      SY(A) FA(P)      2

Air Flasks (6 per ship), conduct 24-hour decay check in accordance with OP 3369; calibrate air pressure gauges, and inspect (to include connected heating and firing circuits).

NOTE: Additional repairs required to barrel, slide valves, rollers, tripping latches, and stop bolt mechanisms, muzzle doors, firing mechanisms and interlocks as a result of the POT&I are as follows:



PART 3.8

MAJOR SHIP SYSTEM 8

MAJOR SHIP SYSTEM 8 - INTEGRATION/ENGINEERING - PUBLIC SHIPYARDS

813	PLANNING AND PRODUCTION CONTROL
830	DESIGN SUPPORT
834	COMPUTER PROGRAMS
840	QUALITY ASSURANCE
841	TEST AND INSPECTION, CRITERIA AND PROCEDURES
851	MAINTENANCE
855	ENGINEERING DRAWINGS AND SPECIFICATIONS
856	TECHNICAL MANUALS AND OTHER DATA

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	PLANNING AND PRODUCTION CONTROL		MAINTENANCE AND REPAIR
813A01A	TOTAL SHIPYARD COST	EIC GROUP UD00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
1.		Ship's Force Overhaul Management System (SFOMS)					
	1.1	Maintain SFOMS throughout the duration of the overhaul. (Type Commander funds only)				FA	
	1.2	Provide training, documentation, and technical assistance in the SFOMS implementation.				PERA	
	1.3	Provide services in support of SFOMS in accordance with the PERA (CRUDES) tasking letter.				SY	
2.		Funds and Planning Estimates				SY	
	2.1	For Type Commander planning and fund control purposes, provide estimated manday and dollar costs to the Type Commander at the below listed stages of overhaul and planning availability:					
	2.1.1	Pre-arrival (prior conference action).					
	2.1.2	Post-arrival (based upon conference action).					
	2.1.3	25% point (after major repairs have been determined for inspections).					
	2.1.4	With fixed price offer or at 50% point if not fixed priced.					
	2.1.5	75% point when not fixed priced.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN		SYSTEM		PLANNING AND PRODUCTION CONTROL			
813A01*							
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

2.1.6 One week after completion when not fixed price.

2.1.7 With departure report.

2.2 Shipyard requests for change in established planning estimates as a result of periodic reviews required above and for supplements to basic work package shall:

2.2.1 Reference the last established planning estimate.

2.2.2 Provide the cost of the change and new total planning estimate.

2.2.3 Provide detailed justification and reasons for situation requiring the change, i.e., revised scope of repairs, supplementary work requests, wage increases, etc.

NOTE: In order to reduce paper work and in lieu of voluminous work books, planning estimate required for the various stages of overhaul listed under item 2.1 above may be forwarded in the following listing:

<u>Routine No.</u>	<u>2K/JCN</u>	<u>Mandays</u>	<u>Labor</u>	<u>Material</u>	<u>Total</u>	<u>Remarks</u>
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OR

<u>EIC/JCN</u>	<u>WR Brief</u>	<u>Mandays</u>	<u>Labor</u>	<u>Material</u>	<u>Total</u>	<u>Remarks</u>
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3. Advance Planning Documents

3.1 Prepare and issue a POT&I Plan.

PERA

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SYSTEM		PLANNING AND PRODUCTION CONTROL			
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$

ASSIGMT

PRI

SY

3.2 Prepare and issue a POT&I Report.

NOTE: Performance of POT&I covered on SWLIN 986A01\*.

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	DESIGN SUPPORT	JCN INDICATED BELOW	TITLE
SWLIN	830A01A	TOTAL SHIPYARD COST	EIC GROUP U600	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1. Hull Vibration Survey SY

1.1 During post repair trial, conduct hull vibration survey and forward report of results to ship and Type Commander.

1.2 Conduct machinery vibration survey after repairs in accordance with 1200 psi Propulsion Plant Test Procedure No. 073U5000012 (Machinery Vibration Analysis).

## 2. Design and Engineering Services - Provide design and engineering services during overhaul as follows: SY

2.1 Design Division Test Documentation

2.2 Design Division Test Coordination

2.3 Plan Printing and Reproduction

NOTE: Plan Preparation/Revision is covered by the individual jobs requiring this service.



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	COMPUTER PROGRAMS	EIC GROUP	MAINTENANCE AND REPAIR
834A01A	TOTAL SHIPYARD COST		

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Provide automated data processing (ADP) services as required throughout the overhaul.

SY

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	QUALITY ASSURANCE	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST		EIC GROUP	MAINTENANCE AND REPAIR
840A01A				

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSGMT      PRI

SY

1. Provide services, inspections and tests as follows:
  - 1.1 Develop inspection procedures and checklists.
  - 1.2 Conduct tests and provide a set of completed test memoranda.
  - 1.3 Conduct laboratory testing of ferrous and non-ferrous metals.
  - 1.4 Conduct chemical analysis of metals, lubricants, fuels, boiler water and industrial materials.
  - 1.5 Conduct non-destructive testing.
  - 1.6 Conduct visual inspections.
  - 1.7 Develop processes for welding, silver brazing, forming, and heat treatment of metals.
  - 1.8 Conduct audits and verify compliance with quality control procedures.

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TESTS AND INSPECTIONS CRITERIA AND PROCEDURES	JCN INDICATED BELOW	TITLE
SWLIN	841A01A	TOTAL SHIPYARD COST	EIC GROUP U60A	MAINTENANCE AND REPAIR

JCN

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

1. Boiler Feedwater Analysis Procedure

FA

- 1.1 Prior to and upon completion of overhaul, certified Steam Generating Plant Inspector observe feedwater sampling and analysis techniques employed by Ship's Force to determine compliance with standards in NSTM Chapter 9560.

- 1.2 Independently analyze samples of feedwater to verify Ship's Force analysis.

- 1.3 Inspect boiler chemistry laboratory and reagents for condition of equipment and its proper use.

2. Submit report of analysis and procedures with recommendations to ship's Commanding Officer with copy to Type Commander.

FA



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	MAINTENANCE	JCN INDICATED BELOW	TITLE
SWLIN	851A01A	TOTAL SHIPYARD COST	EIC GROUP UE00	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Maintenance Engineering

1.1      Provide completed bearing clearance data sheets to Ship's Force on data sheets suitable for Ship's Force retention, prior to completion of overhaul.

SY

1.1.1      Includes propulsion turbines, reduction gears and shafting, steering including rudder, and ship's service power generation equipment which have been opened, repaired or replaced by the shipyard during the overhaul.

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	ENGINEERING DRAWINGS AND SPECIFICATIONS	JCN INDICATED BELOW	TITLE
SWLIN	855A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Revise, update and distribute selected record drawings.

SY

330

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	TECHNICAL MANUALS AND OTHER DATA		MAINTENANCE AND REPAIR
856A01A	TOTAL SHIPYARD COST	EIC GROUP	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1. Revise, update and distribute selected record data.

SY



PART 3.9

MAJOR SHIP SYSTEM 9

MAJOR SHIP SYSTEM 9 - SHIP ASSEMBLY AND SUPPORT SERVICES - PUBLIC SHIPYARDS

980	CONTRACTUAL AND PRODUCTION SUPPORT
982	TRIALS
985	FIRE AND FLOODING PROTECTION
986	TESTS AND INSPECTION
988	CONTRACT DATA REQUIREMENTS (ADMINISTRATION)
990	CONSTRUCTION SUPPORT
991	STAGING, SCAFFOLDING AND CRIBBING
992	TEMPORARY UTILITIES AND SERVICES
993	MATERIAL HANDLING AND REMOVAL
997	DRYDOCKING

HULL NUMBER	SYSTEM	CONTRACTURAL AND PRODUCTION SUPPORT	JCN INDICATED BELOW	TITLE
SWLIN			EIC GROUP	MAINTENANCE AND REPAIR
980A01A		TOTAL SHIPYARD COST	UH00	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI

1. Assist Ship's Force

SY

1.1 In accordance with Type Commander Authorization establish a job order to provide 100 man-days of industrial assistance to Ship's Force for use as directed by the Commanding Officer through the appropriate agency in the shipyard.

## 2. Minor Assist Work

SY

2.1 In accordance with Type Commander Authorization establish a job order to provide for unforeseen minor contingencies in the performance of authorized work, without excessive paper work, by the issuance of a "Minor Assist Work" job order. This job order authorizes production shops to charge for direct labor expended in unanticipated but necessary production assistance incidental to authorized work. Assist work charged to this job order will not exceed four (4) man-hours per incident.



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TRIALS	JCN INDICATED BELOW	TITLE
SWLIN	982A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
JCN	ITEM #	DESCRIPTION	M/D	MATL \$

SY

1. Dock Trials - Conduct post overhaul dock trials.

1.1 Ascertain the exact condition of the machinery of the ship after repairs and alterations are complete and report any defect, deficiency or maladjustment. Applicable procedures include:

1.1.1 Machinery - 1200 psi Propulsion Plant Test Procedure No. 200U5010022 (Dock Trials).

NOTE: Cost of conducting 1200 psi Propulsion Plant Test Procedures during trials is covered in estimate for individual test.

1.1.2 Ordnance/Electronics

2. Sea Trials - Conduct post overhaul sea trial.

2.1 Determine that all work has been completed and the ship and its equipment are ready for sea in all respects. Applicable procedures include:

2.1.1 Machinery - 1200 psi Propulsion Plant Test Procedure No. 200U5050022 (Sea Trials).

NOTE: Cost of conducting 1200 psi Propulsion Plant Test Procedures during trials is covered in estimate for individual test.

2.1.2 Ordnance/Electronics -

SY

# SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN 982A01*		SYSTEM	TRIALS				
JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI

2.2 Take and record data on test forms, and submit required reports.

NOTE: NAVSEA 0901-LP-094-0000 Chapter 094 provides guidance.

NOTE: Correction of deficiencies covered under SWLIN 990A01\*.

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	FIRE AND FLOODING PROTECTION		MAINTENANCE AND REPAIR
985A01A	TOTAL SHIPYARD COST	EIC GROUP U801	

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSGMT	PRI
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## 1. Fire Protection

### 1.1 Provide following fire protection services:

1.1.1 Install and maintain a temporary fire alarm system during the overhaul period. Remove it prior to ship's completion.

SY

1.1.2 Provide fire watch personnel at each hot work site as required by shipyard.

FA

1.1.3 Provide and maintain fire extinguishers for Ship's Force fire watches throughout the availability.

SY

1.1.4 Overhauling activity provides fire watch services at each hot work site to augment those provided by Ship's Force fire watches as determined at pre-arrival conference.

SY

1.2 Replenish CO2 fire extinguishers.

SY

2. Provide flood protection.

SY

NOTE: Temporary services are covered on SWLIN 992A01\*.



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TEST AND INSPECTIONS	JCN INDICATED BELOW	TITLE
SWLIN	986A01A	TOTAL SHIPYARD COST	EIC GROUP UE00	MAINTENANCE AND REPAIR

JCN      ITEM #      DESCRIPTION      M/D      MAT'L \$      COST \$      ASSIGNMT      PRI

1. Conduct pre-overhaul tests and inspections (POT&I).
2. Conduct underwater body pre-overhaul test and inspections for the following systems, submit a report of repairs required by WBS and Item No. to \_\_\_\_\_.

NOTE: Authorized repairs are to be reported and funded under the applicable repair SWLIN.

WBS	Item	System	COMNAV SURFLANT Routine Item
111	01	Shell Plating	9110-2
114	01	Shell Appendages	9110-2
161	01	Stern Tubes	9430-1
161	02	Shaft/Propeller Struts	9440-1
161	03	Rudder Bearing Trunk	9240-2
163	01	Sea Chests	9120-1
165	01	Sonar Domes/Rubber Window	9190-4
243	03	External Shafting	9430-1
244	02	Stern Tube Bearing	9430-1
244	03	Strut Bearing	9430-1
245	01	Propeller	9440-1
562	01	Rudder	9240-2
633	02	Cathodic Protection Anodes	9190-4

NOTE: Item 2 covers inspection costs. Drydocking costs covered under SWLIN 997A01\*.

## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TEST AND INSPECTIONS	JCN INDICATED BELOW	TITLE
SWLIN	986A01A	TOTAL SHIPYARD COST	EIC GROUP UE00	MAINTENANCE AND REPAIR

JCN

ITEM #

DESCRIPTION

M/D

MATL \$

COST \$

ASSIGMT

PRI

1. Conduct pre-overhaul tests and inspections (POT&amp;I).

2. Conduct underwater body pre-overhaul test and inspections for the following systems, submit a report of repairs required by WBS and Item No. to \_\_\_\_\_.

NOTE: Authorized repairs are to be reported and funded under the applicable repair SWLIN.

Satisfies COMNAVSURFPAC  
Standard Work Item

WBS	Item	System	
111	01	Shell Plating	2106 aq
114	01	Shell Appendages	2106 aq
161	01	Stern Tubes	
161	02	Shaft/Propeller Struts	
161	03	Rudder Bearing Trunk	
163	01	Sea Chests	
165	01	Sonar Domes/Rubber Window	
243	03	External Shafting	2106 au
244	02	Stern Tube Bearing	
244	03	Strut Bearing	
245	01	Propeller	2106 at
562	01	Rudder	2106 as
633	02	Cathodic Protection Anodes	2106 ar

NOTE: Item 2 covers inspection costs. Drydocking costs covered under SWLIN 997A01\*.

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TESTS AND INSPECTIONS	JCN INDICATED BELOW	TITLE
SWLIN	986A02A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			U500	

JCN ITEM # DESCRIPTION M/D MATL \$ COST \$ ASSIGNMT PRI

## 1. Propulsion Plant Preliminary Propulsion Examining Board

- 1.1 Completion of repairs and alterations to the propulsion plant and auxiliary systems, conduct a Readiness for Boiler Light-Off Inspection in accordance with 1200 psi Propulsion Plant Test Procedure No. 200U5000022. (Readiness for Boiler Light-Off)

NOTE: Cost of conducting 1200 psi Propulsion Plant Test Procedures during readiness inspection is covered in estimate for individual test.

1.1.1 Conduct in conjunction with Ship's Force.

1.1.2 Submit reports of restrictive discrepancies to Type Commander and ship's Commanding Officer.

1.2 Conduct mock LOE in accordance with existing written procedures.

NOTE: If mock LOE is conducted, Phase I of most 1200 psi Propulsion Plant Test Procedures may be omitted in accordance with NAVSEA 0941-LP-053-6010, Table 3-1.

NOTE: Correction of deficiencies covered on SWLIN 990A01\*.

## 2. Lube Oil and Hydraulic Oil Analysis

2.1 Provide services to conduct routine analysis of lube and hydraulic oil samples submitted by Ship's Force.

SY

340



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		TESTS AND INSPECTIONS		M/D	MATL \$	COST \$	ASSGMT	PRI
JCN	ITEM #	DESCRIPTION						
SWLIN 986A02*	2.2	Provide analysis report to Ship's Force.						
	3.	Technical Laboratory Services						SY
	3.1	Provide technical and laboratory services to inspect and test materials used in connection with production work, including Level 1 materials.						
	4.	Tempest Inspection						SY
	4.1	Perform post overhaul Tempest inspection in accordance with MIL-STD-1680 (Ships).						
	5.	Inspection Services						SY
	5.1	Provide inspection services as specified in NAVSHIPSINST 7600.26B of 19 June 1970. These services include the inspection and test of productive work and associated engineering or technician requirements for quality control or assurance action required by an external technical authority or specified by a customer.						
	6.	Electromagnetic Interference Tests (EMI)						SY
	6.1	Perform post overhaul EMI tests in accordance with NAVSEAINST 9671.25.						
	7.	Secure Electrical Information Processing Systems						FA#
	7.1	Conduct Field Technical Authority inspection of Secure Electrical Information Processing Systems.						

NOTE: Must be accomplished prior to commencement of overhaul.

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TEST AND INSPECTION	JCN INDICATED BELOW	TITLE
SWLIN	986A03A	TOTAL SHIPYARD COST	EIC GROUP	UE00
				MAINTENANCE AND REPAIR

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.	Combat System Battery Alignment				SY	2

## 1.1 Prerequisites:

Prior to Battery Alignment inspect all optics and advise the Type Commander and the ship if repairs are required.

NOTE: All optics will normally have been repaired and gassed during the pre-overhaul TAV.

NOTE: Individual element not included as part of ROH work package shall be checked prior to beginning the Battery Alignment.

- 1.2 Perform all mission essential Battery Alignment adjustments to bring the search radars, sonar, fire control radars, computers, gyros, stable elements, guns, missile launchers, underwater fire control system and torpedo battery to a common reference. These Battery Alignment checks shall be performed in accordance with OP 762 and OP 2456.

NOTE: Omission of an element does not remove the requirement to include it in the alignment.

- 1.3 All Tram and bench mark data shall be engraved on brass plates and affixed to the specific equipment concerned.

- 1.4 Provide a complete set of battery alignment data to the ship within two weeks of ROH completion.

## SHIP SYSTEM WORK DESCRIPTION

ITEM #

**1.5 Search Radar mechanical and electrical zero should coincide with the references element mechanical zero.**

## 2. Weapon Systems Pre-Arrival Inspection

SY

## 2.1 Conduct Weapons Systems Pre-Arrival Inspection.

2.2 Provide list of deficiencies to Ship's Force and TYCOM with cost estimate for each repair item required.



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM CONTRACT DATA REQUIREMENTS (ADMINISTRATION)	JCN INDICATED BELOW	TITLE
SWLIN	TOTAL SHIPYARD COST	EIC GROUP	
988A01A			

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Provide services to prepare and issue a SARP.      SY

1.1      Maintain SARP as a current and accurate document; revise and re-issue as necessary.

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	CONSTRUCTION SUPPORT	JCN INDICATED BELOW	TITLE
SWLIN	990A01A	TOTAL SHIPYARD COST	EIC GROUP	MAINTENANCE AND REPAIR
			UHO0	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

1.      Dock and Sea Trial Discrepancies (New Work)

SY

1.1      Accomplish minor new work arising from dock and post-repair trials. Intent of this item is to:

1.1.1      Correct dock and post repair trial minor discrepancies which constitute new work within an overall limitation of 100 mandays. Any new minor work undertaken shall not delay the ship's completion unless sanctioned by Type Commander. A limit of \$1,000.00 for any single item is established. Advise Type Commander by message of any major repairs required as a result of trials. Provide return costs for each item repaired under this SWLIN in the ship's departure report.

2.      Dock and Sea Trial Discrepancies (Authorized Work)

SY

2.1      Accomplish repairs to discrepancies uncovered during dock and post repair trials as follows:

2.1.1      Major work items will be accomplished on the basic SWLIN, or charged to defective work and spoilage job order as deemed appropriate. These repairs are to be accomplished as expeditiously as possible in order to facilitate the timely closing of all outstanding job orders at the completion of the ship's availability.

# SHIP SYSTEM WORK DESCRIPTION

## CONTINUATION SHEET

SWLIN 990A01*		SYSTEM	CONSTRUCTION SUPPORT	
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JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	3.	Propulsion Examination Board (PEB) Discrepancies				SY	
	3.1	Correct discrepancies resulting from preliminary PEB inspection (SWLIN 986A02*) as authorized by Type Commander.					
	3.2	Correct discrepancies resulting from PEB inspection.					



# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	STAGING SCAFFOLDING AND CRIBBING	EIC GROUP	MAINTENANCE AND REPAIR
991A01A	TOTAL SHIPYARD COST	U806	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

SY

1.      Staging and Routine Drydock Work

1.1      This work item covers staging, cranes and brows, forklifts, portable platforms, and rolling scaffolds, to accomplish the following inspections, repairs, blasting and painting, while the ship is in drydock:

- 1.1.1      Underwater Hull; Inspection
- 1.1.2      Underwater Body; Clean and Paint
- 1.1.3      Freeboard; Clean and Paint
- 1.1.4      Sea Valves; Repair
- 1.1.5      Sea Chests; Inspection
- 1.1.6      Propeller; Inspection
- 1.1.7      Propulsion Shaft; Inspection
- 1.1.8      Cathodic Protection System; Inspection
- 1.1.9      Rudder; Fin Stabilizers, etc.; Inspection
- 1.1.10      Weldments; Inspection and Repair
- 1.1.11      Sonar Transducer and Dome; Replace or Inspection and Test

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	TEMPORARY UTILITIES AND SERVICES	JCN INDICATED BELOW	TITLE
SWLIN	992A01A	TOTAL SHIPYARD COST	EIC GROUP	U000

JCN	ITEM #	DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
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## 1. Temporary Services

SY

1.1 Provide the necessary services to the ship while in overhaul and not self sustaining. Includes the connecting/disconnecting of temporary services from ship arrival to departure during the period the related ship system has been restricted or is inoperative for repairs. Services shall include:

- 1.1.1 Electric power
- 1.1.2 Firemain and flushing water
- 1.1.3 100# shore steam
- 1.1.4 Feed Water
- 1.1.5 Fresh water (potable)
- 1.1.6 Telephone
- 1.1.7 Soil connections
- 1.1.8 Lighting
- 1.1.9 Brows and quarterdeck shelters
- 1.1.10 Garbage disposal service
- 1.1.11 Temporary ventilation
- 1.1.12 Compressed air

## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SWLIN 992A01*		SYSTEM	TEMPORARY UTILITIES AND SERVICES					
JCN	ITEM #		DESCRIPTION	M/D	MATL \$	COST \$	ASSIGMT	PRI
	1.1.13		Install and maintain gangways, catwalks, and all staging, temporary lifelines and stanchions required for safe access to work areas. While in drydock this will include the following (or equivalent):					
	1.1.13.1		Nylon or rope webbing attached securely, top and bottom, to the lifelines around the full perimeter of both the main deck and above where necessary.					
	1.1.13.2		Nylon or rope webbing or a net rigged below, affixed to all brows and brow approaches.					
	1.2		Provide services of gas test engineer as required during the overhaul.					
2.		Temporary Messing and Berthing					SY	
	2.1		Provide temporary messing and galley facilities and berthing facilities (if required).					
3.		Defuel and Refuel Ship					SY	
	3.1		Provide equipment for removal of all fossil fuels from ship (N.S. and N.D. fuel oil, JP-5, marine diesel, etc.) including transportation for proper stowage and sludge barge service. Includes fuel analysis and a report to the cognizant codes and the ship's Commanding Officer.					



## CONTINUATION SHEET

## SHIP SYSTEM WORK DESCRIPTION

SYSTEM		TEMPORARY UTILITIES AND SERVICES		M/D	MATL \$	COST \$	ASSIGMT	PRI
JCN	ITEM #	DESCRIPTION						

NOTE: NSTM Chapter 9550 provides guidance and provides for refueling ship prior to lightoff and dock trials.

4. Portable Tools for Ship's Force work.

4.1 Provide portable tools for Ship's Force work.

NOTE: Crane and rigging services are covered on SWLIN 993A01\*.

NOTE: The cost of temporary services which are uniquely related to specific repairs shall be charged to the job order for those repairs.

NOTE: Temporary services shall be disconnected at the earliest date mutually agreeable to the Commanding Officer and the Shipyard after they are no longer needed.

NOTE: Appropriate OPNAVINST for provision of ship-to-ship connections and services provide guidance. Example: OPNAVINST 9930.1C (Ship-to-Shore Water Connections).

NOTE: Fire protection services are covered on SWLIN 985A01\*.

SY

# SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	MATERIAL HANDLING AND REMOVAL		MAINTENANCE AND REPAIR
993A01A	TOTAL SHIPYARD COST	EIC GROUP	U000

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGNMT      PRI

## 1. Hull Accesses

- 1.1 Provide temporary hull access for the handling of equipment and machinery. This SWLIN provides for the removal, reinstallation, testing and inspection of accesses made in primary hull structure for shipping and unshipping equipment and machinery to ensure that closures are restored to the original structure efficiency. Includes authorization as to access configuration and location, plus testing and inspection of fasteners and welds of reinstalled closures. Copies of inspection report will be provided to the Type Commander and Ship's Commanding Officer. General Specifications for Ship's U.S.N. Section 9090-1 Welding, Riveting and Allied Processes, NAVSHIPS 0900-000-1000 Fabrication, Welding and Inspection Ship Hulls and NSTM Chapter 9110 Hull Structure provides guidance.

## 2. Repair Parts and Allowance Material

Provide the following services and material to support the Ship's Force with repair parts and allowance materials:

- 2.1 Assistance in the form of material handling equipment, crane services, and transportation for the off-loading and on-loading of all repair parts and allowance material.

SY

SY

# SHIP SYSTEM WORK DESCRIPTION

CONTINUATION SHEET

SWLIN 993A01*		SYSTEM	MATERIAL HANDLING AND REMOVAL	
JCN	ITEM #	DESCRIPTION	M/D	MATL \$
				COST \$
				ASSGMT
				PRI

- 2.2 Warehouse space, facilities and materials handling equipment for the proper and secure stowage of off-loaded allowance items and material received during the overhaul period.
- 2.3 Packing and preservation services for the packaging or repackaging of allowance list material.
- 2.4 Technical reference books and civilian technical assistance for identification of material.

NOTE: Approval of ship's Commanding Officer must be obtained prior to shipyard utilization of ships onboard spare parts and allowance material. The shipyard is responsible for the timely replacement of spares or other allowance material obtained from ship's OBRP.

- 3. Conduct Supply Operation Assistance Program (SOAP).
- 4. Crane and Rigging Services

FA  
SY

Provide crane and rigging services in support of production shops and Ship's Force industrial effort.



## SHIP SYSTEM WORK DESCRIPTION

HULL NUMBER	SYSTEM	JCN INDICATED BELOW	TITLE
SWLIN	997A01A	DRYDOCKING TOTAL SHIPYARD COST	MAINTENANCE AND REPAIR
		EIC GROUP U80A	

JCN      ITEM #      DESCRIPTION      M/D      MATL \$      COST \$      ASSIGMT      PRI

## 1.      Dock and Undock Ship

SY

1.1      Prepare graving dock, floating drydock or marine railway; dock ship; undock ship and clean railway after final hauling. NSTM Chapter 9970 provides guidance.

1.2      Provide the Commanding Officer with Docking Report information required by NSTM Chapter 9070. Prepare propeller docking report, NAVSHIPS 223.4 (NAVSHIPS Report Symbol 9070-2, required by NSTM Chapter 9440).

NOTE:      All staging provided by SWLIN 991A01\*.

NOTE:      All temporary services provided in SWLIN 992A01\*.

PART 4

R/M "D" ALTS LIST

# PART 4

DDG-37 CLASS SARP

PLANNING DOCUMENT

R/M "D" ALTS

07/22/77

ALTERATION NUMBER	BRIEF	SWBS
138	RELO DISTIL PLANT BRINE PUMP	531
191	PROVIDE ADDITIONAL DECK DRAINS	526
200	PROVIDE DRNAGE VOID (6-190-0-V)	529
208	PROVIDE ADD DRNS BLWOUT HATCH	526
217	MOD RUDDER POST PACKING GLAND	561
231	REPL STUD&NUTS, ATOMIZING VALVE	255
235	INSTL ACCESS PLT: REMOV VNT FN	512
238	WRK INCNTL TO O/A6840 5/54 O-8	481
296	STEERING GEAR HYD SYS MODS	561
304	REMOVE SOOTBLOWER UNITS G & H	221
310	INSTALL FDB OPERATING SHAFT	251
316	INSP/MOD FUEL OIL BURNER LEADS	261
330	REPL AMMO HOIST DRIVES	711
338	REPL ACC AIR FLOW TOTAL RELAYS	221
346	LP TURB ASTERN RING BOLT MOD	231
352	MK32 MOD5&7 SHIPBD DRAW MODS	751
355	TERRIER STRKDNW/BLWOUT HATCH	169
362	CIRCUIT FD FLOODING ALARM SYS	436
367	LOW LUBE OIL ALARM	436
1010	MOD CVR PLATE ON COOLING COILS	512
1017	INSTL IMPRV SOOTBLOWER HEADS	221
1027	200KW MG SET COOL WATER ALARM	314
1043	INSTL DIODES 600 KW 400 HZ MG ST	314
1045	REINFORCE DFT	255
1066	ACC/FWC PRESSURE GAGE INSTALL	221
1072	MOD MK NC2 MOD 2A PLOT	426
1100	INSTL ELLIPTICAL WAVEGUIDE	471
1109	F.O. SIMPLEX STRAINERS	261
1112	SHOCK HARDENED BRICK WORK	221
1113	REPL UNSAT HOTWATER HEATERS	533
1125	STEER GEAR PWR FAILURE LOCK	561
1133	REPLMT OF SPA-4 REPEATERS	450
1135	FLOODING ALARM FOR SONAR SPACE	436
1137	WATER TIGHT AVAP	411
1138	FEEDWATER VALVE HOUSING DRAIN	255
1147	AUX EXH STEAM EXPAND JOINT	534
1149	SUPERHTR/ROT EQUIP HP DRN ORF	221
1154	REPL LS-43X DRUM LVL TRANSMITR	255
1165	PIVOT PAD TURB JOURNAL BEARING	231
1166	REMOV 4 PEN RECORDRS&ASSOC EQP	221



## PART 4 (CONT)

ALTERATION NUMBER	BRIEF	SWBS
1167	REMOV FOAM SPRINKL SYS MAGAZNE	555
1169	RELOCATE MISSILE MAG DRAINS	529
1172	ACCESS FOR CLN VENTS & A/C SYS	512
1198	RELOC MISSILE HOUSE SPR. VALVE	522
1210	INSTL CHAIN GUIDE FOR YARWAY	221
1211	ASROC BLAST SHIELD REPLACEMENT	721
1212	BOILER LOWER SCREEN BAFFLE MOD	221
1213	SSTG LUBE OIL FILTER RELOCATE	341
1216	INSTL EVAP FEED TREATMENT SYS	531
1235	MORPHOLINE INJECTION BACKFIT	255
1236	REMOVE FO TANK HEATING COILS	192
1241	INSTL FUNNEL IN WASTE DRN LINE	529
1244	MN COND TEMP INDICATOR & ALARM	254
1245	ACC VALVE MOD	221
1249	REMOVE COMB AIR FLOW CNTRL DMP	251
1252	MN FEED PUMP STEAM ADM VLV MOD	255
1265	WESTINGHOUSE FDB L.O. FILTER	251
1270	TERRIER TRANS CAR SOLENOID REPL	712
1276	CHECK VLV ON FP180 PROPORTIONR	522
1277	NTDS COOLING WATER ALARM EXT	436
1279	ACC AIR LOCK MOD	221
1281	SSTG LUBE OIL PUMP MOD KIT	311
1286	BOILER PT FAN BUTERFLY VLV MOD	251
1289	MFP LUBE OIL CONTROLLER	255
1290	PUMP ROOM LEAK OFF	
1291	REPLACE MOORE FWC SYS TRANS	255
1293	FDB TACHOMETER REPLACE	251
1298	REPL CONAIRBORNE TEMP SYSTEM	
1299	DUPLEX FUEL OIL STRAINER	

PART 5

RECORD OF CHANGES

PART 5

RECORD OF CHANGES FOR ISSUE - (DATE OF ISSUE)

SWLIN	DESCRIPTION OF CHANGE	AUTHORITY
(SWLIN affected by change)	(Brief Description of Change)	(Document Authorizing Change)



PART 6  
GLOSSARY

362

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## PART 6

### GLOSSARY

**Calibration** - The process by which Standards and Calibration Laboratories and qualification activities compare a standard (test or measuring equipment or instrument) with a standard of higher accuracy to ensure that the former is within specified limits throughout its entire range. The calibration process involves the use of approved instrument calibration procedures and includes adjustments or incidental repair necessary to bring the standard or instrument being calibrated within specified limits.

**Classification of Repair or Overhaul** - The following definitions from NAVSHIPINST 4790.1 Change 4, 9 July 1973 apply to terms used in SARP, Part 3.

1. Class A Work which requires such overhaul or repairs, modifications, field changes, ORDALTS or SHIPALTS, as will sustain or improve the operating and performance characteristics of the system, sub-system or component being repaired or altered to meet its most recent design and technical specifications for that item.

It is intended that the end product be in "like-new" condition in appearance as well as in operation and performance. All manufacturers' and technical manual performance standards and specifications unless superseded by proper authority, will be met as will all technical documentation. The repair activity will demonstrate that the end product successfully meets all performance criteria specified by the governing specifications. Defining an overhaul as Class "A" means that all actions required to meet the definition is applicable to all components, sub-systems and systems whether machinery/electrical/hull, electronics or weapons, without regard to equipment cost, size or complexity. Thus, a Class "A" overhaul of a 10 horsepower motor is just as much Class "A" as that of a radar set or a boiler, although the demands on resources differ greatly.

2. Class B Work which requires such overhaul or repairs as will restore the operating and performance characteristics of a system, sub-system or component to its "original" design and technical specifications. If it is required to restore the operating and performance characteristics of an item to other than its original design and technical specifications, it must be so specified and the performance criteria defined. SHIPALTS, ORDALTS, field changes and modifications, even if applicable, are not to be accomplished unless specified by the Customer. Maintenance adjustment and calibration routines specified by authority, are required. The repair activity will demonstrate that the end product successfully meets all performance criteria specified by the governing specifications.
3. Class C Repair work on a system, sub-system or component specified by the work request or that work required to correct the particular deficient conditions or malfunctions specified by the Customer. The repair activity must demonstrate that the work requested has been accomplished or that the conditions/malfunctions described have

## PART 6

### GLOSSARY (CONT)

3. Class C (Cont) been corrected, but the repairing activity has no responsibility for the repair or proper operation of the associated components of the equipment or for the operation of the system/sub-system equipment as a whole.
4. Class D Work associated with "Open, Inspect and Report" type of work request where the Customer cannot be specific about what is or may be wrong with the item. This Class of work is intended to be diagnostic in nature and thus depending on the type of equipment, may require various tests, followed by inspection to assist in a complete diagnosis. The repair activity will report findings, recommendations and cost estimates to the Customer for authorization prior to any repair work being accomplished. When requested by the Customer, minor repairs and adjustments may be accomplished without prior authorization to the extent specified.
5. Class E Work required to incorporate all alterations and modifications specified for a designated system, sub-system or component. The repair activity will demonstrate the successful checkout of the work accomplished to assure compliance with the performance standards established for the modification only to the extent of the work performed. When required by the Customer, the repair activity will conduct system tests to prove system operability through affected interfaces. Repairs, if any, are minor in nature.

Cost Estimating - The following definitions apply to the cost estimating terms used in SARP, Part 3.

1. M/D - Man-days for the work in the direct accomplishment of the applicable SWLIN and directly chargeable to Customer funds.
2. MATL \$ - Costs, in dollars, for all material (includes all equipment components, assemblies, contractor support, etc.) provided by the Shipyard for accomplishment of the SWLIN. The cost does not include Government Furnished Material (GFM) and centrally procured Long Lead Time Material (LLTM) provided to the Shipyard.
3. Cost \$ - The sum, in dollars, of M/D and Material Costs to be charged to the Customer for work accomplished.
4. Total Shipyard Cost - The total SWLIN cost (in dollars) directly chargeable to Customer funds.

Customer - An activity (e.g., NAVSEA, Type Commander) that possesses the authorization and funds for the accomplishment of overhaul work.

EIC (Equipment Identification Code) - An alphanumeric code used in the 3-M (Maintenance and Material Management) System to identify system, sub-system, and the equipment on which maintenance is performed. The EIC and its relation to the 3-M System is further defined by Maintenance Data Collection System EIC Manual.



## PART 6

### GLOSSARY (CONT)

Overhaul Activity - Activity responsible to the Customer for the accomplishment of the overhaul work. Overhaul Activity will be the Naval Shipyard or Supervisor of Shipbuilding as designated by CNO.

Forces Afloat Activities - Ship's Company, Tenders, DATC/FMAG, MOTU and other such agencies as arranged by the Type Commander.

Grooming - The process of alignment, adjusting and replacing marginal parts within an operational unit or system so that the unit or system will meet the tolerance requirements. This is not to be interpreted as a refurbishment or restoration of a unit or system.

JCN (Job Control Number) - A 13 digit alphanumeric code which correlates 3-M System documents submitted on a specific work item. The first five digits identify the ship, are common to all SWLIN's, and are not repeated throughout the SARP. Only the last eight digits appear in each SWLIN (Work Request Number).

Overhaul Maintenance - The process of servicing equipment for the purpose of retaining it in operational condition. Overhaul maintenance normally includes lubricating, adjusting, calibrating, cleaning and replacement of certain consumable parts. Overhaul maintenance is distinguished from "refurbishment" in that overhaul maintenance preserves or restores equipment to such a condition that it may be effectively utilized for its designated purpose without appreciably adding to its permanent value or prolonging its intended life.

Refurbishment - Restoring equipment in accordance with specified standards for the purpose of extending its operational life. It normally includes disassembly, inspection, cleaning, replacement of parts, reassembly, and inspection and testing.

Ship System - A combination of parts, assemblies and components on a ship to perform a specific function or functions. The Ship System used in the SARP provides manageable hardware units suited to overhaul work. NAVSHIPS 0900-039-9010 defines the numbering, contents and boundaries of the Ship Systems used (see SWBS).

Ships System Work Description (SSWD) - See Appendix A.

SWBS (Ship Work Breakdown Structure) - A single language numbering structure for defining Ship System Boundaries (NAVSHIPS 0900-039-9010).

SWLIN (System Work List Item Number) - A seven digit alphanumeric code used in SARP, Part 3 to identify overhaul work on a Ship System basis. The SWLIN is further defined in Appendix A, Attachment (1).

Tested - The process (using a comparator) Forces Afloat utilizes to analyze gages, to determine proper operation. These gages are labeled to indicate date tested, due date, and initials of person performing test.

WLI (Work List Item) - Is the source of the individual items such as ShipAlts, Trial Board Item, etc.

## SWLIN STRUCTURE

SWLIN - A seven digit alphanumeric code used in SARP Part 3 to identify overhaul work on a Ship System basis. SWLIN will also be used to refer to the contents of the pages of a given system. The SWLIN is further defined in the following sample:

Sample SWLIN:

1	4	0	A	0	3	A
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Applicable Ship System - SWBS  
(Ships Work Breakdown Structure)  
Number derived from NAVSHIPS 0900-039-9010

Customer and Type of Work - Single Letter  
indicating the following:

- A - TYCOM Maintenance and A & I Items, non-Nuclear
- B - TYCOM Maintenance, Nuclear
- C - TYCOM Alteration, etc., non-Nuclear
- D - NAVSEA Alteration, non-Nuclear
- E - NAVSEA Alteration, Nuclear
- F - NAVSEA OrdAlts
- G - TYCOM Alteration, etc., Nuclear
- H - Administrative/Services (Prorated all Customers), non-Nuclear
- J - NAVSEA Miscellaneous
- K - Administrative/Services (DSA funded)
- L - Administrative/Services (Prorated all Customers)
- M - PERA
- N - NAVELEX

Sequential Number - Two digit number, from 01 through 99, assigned to each SWLIN of work in a Ship System. For example, this would be the third SWLIN of work in Ship System No. 140 (Superstructure).

SWLIN Revision - Single letter indicating the current revision of the SWLIN. The letter A is used for the initial publication of the entire SARP.